



Strategies of Learning Reading Skill Across Attitudinal/Motivational Attributes and Their Predictive Power Toward Reading Comprehension

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Abstract. The present paper illustrated how learners' attitudes and motivation in English learning correlate with their strategies for learning reading skills. In addition, how their reading learning strategies predict reading comprehension skills was also revealed. In this case, 664 students of the English education department in Indonesia were selected as the study subjects. Participants were asked to complete a 65-item Strategy Inventory for Reading Skill Learning (SIRSL), a 76-item Attitude/Motivation Test Battery (AMTB), and a 15-item self-assessment of reading comprehension skills. The collected data were analyzed by using Pearson product-moment correlation. The study found that attitudinal/motivational attributes correlate significantly with the general use of strategies for reading skill learning. In addition, it is also found that reading skill learning strategies are significant predictors of reading comprehension achievement ($r = .524, p < .000$), with text/sentence structure processing strategies and extra-linguistic processing strategies being the best predictors. These findings demonstrated that classroom teachers should be able to develop students' positive attitudes and strong motivation to learn English to improve their use of strategies in learning reading. Moreover, linguistic and extra-linguistic processing strategies should be emphasized in reading instruction as they best predict the students' reading skills.

Keywords: attitude · motivation · reading comprehension · reading strategies

1 Introduction

The concept of learning strategies was attempted to be defined theoretically when research interest in this topic proliferated in the 1980s. Holley & Dansereau (1984) defined them as operations employed by the learner to aid the acquisition, storage, retrieval, and use of information. Similarly, O'Malley & Chamot (1990) mentioned that learning strategies are unique ways of "processing information that enhance comprehension, learning, or retention of the information" (p. 1). In these two definitions learning strategies are perceived as mental processes that are taking place inside the learner's mind; thus, they are primarily unobservable. Mayer (1988), on the other hand, views

learning strategies as a set of a learner's behaviors intended to influence how the learner processes information.

Moreover, Oxford (1990) defined them as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). In these two definitions learning strategies are perceived as observable steps that the learners take in their learning process. In other words, the characteristic of learning strategies is that they are observable as behaviors. Based on these definitions, there is an argument that learning strategies contain both covert mental processes and overt behaviors (Mistar, 2002). For example, the first element may be memorizing, imagining, or controlling unobservable emotions, whereas the second can be underlining, paraphrasing, note-taking, and the like, which are observable.

Initially, O'Malley and Chamot (1990) attempted to provide a systematic classification of learning strategies based on cognitive learning theory into cognitive, metacognitive, and socio-affective strategies. Cognitive strategies refer to "steps or operations used in problem-solving that require direct analysis, transformation or synthesis of learning materials" (Ellis, 1994, p. 536). Among the cognitive strategies, O'Malley & Chamot (1990) listed are repetition, inferencing, and translation. Metacognitive strategies refer to steps to "make use of knowledge about cognitive processes and constitute an attempt to regulate language learning using planning, monitoring and evaluating" (Ellis, 1994, p. 538), and these strategies include such strategies as advance organizers, selective attention, self-monitoring, and self-evaluation. Lastly, social/affective strategies relate to "how learners elect to interact with other learners or native speakers' of the target language" (Ellis, 1994, p. 538). These social/affective strategies involve cooperation, questioning for clarification, and self-reinforcement.

A more detailed classification was proposed by Oxford (1990), who mentioned two broad categories of second/foreign learning strategies: direct strategies and indirect strategies. The first category refers to strategies that directly involve the target language being learned, while those in the second category do not have a direct connection with the target language but still play essential roles in acquiring the language being learned. Direct learning strategies contain three strategies: memory, cognitive, and compensation. Memory strategies, also called mnemonic strategies, refer to strategies that learners employ to effectively store and retrieve new knowledge, such as grouping words based on a specific category and acting out physical movements to remember new words that fall within this category. Cognitive strategies are strategies that learners use in their effort to comprehend linguistic inputs or produce linguistic outputs. Such strategies include taking notes, translating into the first language, scanning, and skimming. Finally, compensation strategies refer to strategies that learners employ when there is a breakdown in language use due to a shortage of knowledge. As such, the strategies allow them to continue using the language despite knowledge gaps that may block language use. Such strategies as using gestures, using synonyms, or even switching to the first language are examples of compensation strategies.

The indirect strategies also consist of metacognitive, affective, and social strategies. Metacognitive strategies refer to strategies that learners use to manage their learning activities so that an effective learning process occurs. These include such strategies as planning learning activities and making an evaluation of the progress they make.

Affective strategies include strategies that learners use to control emotions, motivations, and attitudes toward the task of learning. For example, such strategies as using laughter to lower anxiety and encouraging themselves to take risks in using language belong to this category. Lastly, social strategies refer to strategies that learners use to enhance communicative interactions with other people. Such strategies as asking questions and developing cultural understanding are examples of social strategies.

When theoretically based classifications of learning strategies were obtained in the 1990s, research on this area got more and more attention from scholars. Some studies employed descriptive design aiming at profiling the pattern of learning strategies by certain groups of learners. Within this category were studied by Oxford and Ehrman (1995) in the United States, Lengkanawati (1997) in Indonesia, Lunt (2000) in Australia, and Wharton (2000) in Singapore. Some other studies tried to investigate the association between learning strategies and learning success. Although most of the studies within this category revealed their significant correlations, as reported by Dreyer and Oxford (1996) among African learners, Park (1997) among Korean learners, Mistar (2002) among Indonesian learners, and Habók and Magyar (2018) in Hungary, some other studies resulted in an insignificant correlation between learning strategies and learning success (Lengkanawati, 1997; Oxford & Ehrman, 1995). Lastly, some studies attempt to identify factors that influence the use of learning strategies. For example, such factors as gender (Green & Oxford, 1995; Kaylani, 1996), cultural background (LoCastro, 1994; Grainger, 1997), personality (Ehrman & Oxford, 1990), attitude/motivation (Gardner, Tremblay & Masgoret, 1997, Mistar, 2002), learner autonomy (Canbay, 2020; Zakaria, Aziz & Ramayah, 2017), and self-efficacy (Lee, Watson & Watson, 2020; Tus, Dunghit, Dunghit Jr. & Artiola, 2021) have been found to correlate with learning strategies significantly.

Further development of the studies on this area of interest rests on investigating strategies for learning specific language skills. In the case of strategies in learning reading, the early stages of the attempt stem from an interest in characterizing how reading activities take place (Alderson, 2000). For example, Block (1986) defined reading strategies as actions of how readers complete reading tasks, what textual cues they pay attention to, how they construct the meanings of what they read, and how they compensate when problems in reading are encountered. Likewise, Anastasiou and Griva (2009) defined reading strategies as specific, deliberate, goal-directed mental processes or behaviors which control and modify the reader's effort to decode a text, understand words and construct the meaning of a text (pp. 283–284). In short, reading strategies may be defined as an action or series of actions employed by a reader to construct the meaning of a text (Garner, 1987).

Similar to research on language learning strategies, studies on reading strategies may also be classified into three groups. First, studies with descriptive design are intended to profile the use of reading strategies. Janzen (1996) revealed that reading strategies might be as simple as rereading difficult text sections and as complicated as summarizing and activating background knowledge related to the text topic. Second, Sheorey and Mokhtari (2001) classified reading strategies into cognitive, metacognitive, and support strategies. Cognitive strategies are “the actions and procedures readers use while working directly with the text” (p. 436), such as utilizing prior knowledge and guessing

the meaning of unknown words. Metacognitive strategies, moreover, are deliberately planned actions by which learners monitor or manage their reading, such as setting up a purpose in reading and reviewing to improve comprehension. Lastly, support strategies are support mechanisms to enhance comprehension, such as using a dictionary, highlighting, or underlining. In a later study, this classification of strategies is revised through factor analysis into global, problem-solving, and support strategies (Mokhtari & Reichard, 2002). Al-Dawaideh and Al-Saadi (2013) reported that students at King Abdulaziz University employed problem-solving strategies at high intensity and global and support strategies at a moderate level. The exact order of use was reported in a study of Turkish EFL learners (Yüksel & Yüksel, 2012). A slightly different order of the intensity of use was reported by Miller (2017) that the most frequently used reading strategies were problem-solving, followed by support and global reading strategies.

Another group of studies tried to correlate reading strategies and reading performance, but the findings were inconclusive. Miller (2017) reported that the correlation between the students' metacognitive reading strategies did not correlate significantly with their reading placement scores. A non-significant correlation between the two variables was also found among ESL students in the Philippines (Estacio, 2013). However, Rastegar, Kermani and Khabir (2017) found that the correlation between metacognitive reading strategies and reading comprehension achievement was positively significant. A significant positive correlation between the two variables was also reported in other studies (Anastasiou & Griva, 2009; Petrus & Shah, 2020; Zare & Othman, 2013).

The last group of studies attempted to identify factors that influence the use of reading strategies. For example, in Anastasiou and Griva's study (2009), poor and good readers were reported to have different levels of awareness of the availability of cognitive strategies and to use metacognitive strategies at different intensities. Other variables found to affect the use of reading strategies are gender difference (Zare & Othman, 2013), target language status as being ESL or EFL (Karbalaee, 2010), grade (Shan, 2013), personality types (Anggraini, Cahyono, Anugerahwati & Ivone, 2022), being native or non-native learners of English (Sheorey & Mokhtari, 2001), and motivation to read (Rochmawati, Fatmawati & Sukma, 2022).

A few points to note from the studies reviewed above are that the role of attitudinal and motivational factors in affecting the use of reading strategies are not yet explored thoroughly and that the findings of studies on the correlation between reading strategies and reading achievement are not yet conclusive. Thus, to fill these gaps, the present study is carried out by incorporating the literature on language learning strategies in general and reading strategies. To be more specific, the study is to address the following two questions:

1. Do attitudinal and motivational attributes correlate with using strategies to learn reading skills? If yes, which attributes contribute the best?
2. Does the use of strategies in learning reading skills correlate with the learners' perceived reading comprehension skills? If yes, which strategy types predict the best?

2 Research Method

2.1 Subjects of the Study

As many as 664 students of the English education department of five universities in East Java, Indonesia, participated in the present study. They were sophomores ($n = 252$), juniors ($n = 226$), and seniors ($n = 186$). Regarding gender distribution, they were 458 females and 206 males with the age range between 20 and 23 years old.

2.2 Research Instruments

2.2.1 Instrument for Attitude/Motivation Attributes

The modified version of the Attitude/Motivation Test Battery (Gardner et al., 1997) was used to examine the attributes of attitudes/motivation in foreign language learning. This was initially developed for Canadian learners of French, so some sorts of adjustments were made to make it applicable to Indonesian learners of English (Mistar, 2002). This instrument contains nine attitudinal and motivational attributes, covering attitudes toward native speakers of English (8 items), attitudes toward learning English (10 items), desire to learn English (10 items), English class anxiety (10 items), English use anxiety (10 items), interest in foreign languages (10 items), instrumental orientation (4 items), integrative orientation (4 items), and motivational intensity (10 items), totaling 76 items. All the items of instrumental and integrative orientation are positively keyed, half of the items of the other seven attributes are positively keyed, and the other half are keyed negatively. The overall reliability coefficient of the instrument was .938. The reliability index of each of the nine attributes is .621, .845, .712, .585, .830, .737, .498, .776, and .702, respectively.

2.2.2 Instrument for Assessing Strategies of Reading Skill Learning

A questionnaire called Strategy Inventory for Reading Skill Learning (SIRSL) was employed to collect the data on the learners' strategies for learning reading skills. Initially, the questionnaire consisted of eighty items prepared in the Indonesian language. Before its use for the present research purpose, it was tried out by forty students of the English Education Department, Universitas Islam Malang. An analysis of the construct validity resulted from 65 items contributing significantly to the assessment of the intended construct. Thus, the final version of the questionnaire consisted of 65 items, assessing nine categories of strategies, including cognitive processing strategies (15 items), metacognitive processing strategies (10 items), text/sentence structure processing strategies (9 items), word attacking strategies (6 items), comprehension monitoring strategies (6 items), extra-linguistic processing strategies (5 items), text aid utilizing strategies (5 items), predicting strategies (5 items), and social compensatory strategies (4 items). The reliability indexes of these strategy types, as measured by using Cronbach's Alpha method (Pallant, 2011), were 0.871, 0.820, 0.794, 0.729, 0.747, 0.674, 0.659, 0.715, and 0.641, respectively. The reliability index of the overall strategies was .952, indicating very high reliability.

2.2.3 Instrument for Assessing Reading Comprehension

To measure the students' reading comprehension, a-15 item of self-assessment was administered, asking them to self-assess their reading skills. To each item, they had to respond by circling 1, 2, 3, 4, or 5, indicating how well they were able to perform a reading act with one being "not at all", 2 "with much difficulty", 3 "with some difficulty", 4 "with minimal difficulty", and 5 "easily". Self-assessment data are reliable as they correlate significantly with language proficiency (Bachman & Palmer, 1989; Mistar, 2011). Johansson (2013) also reported the significant relationship between student self-assessment of their reading literacy skills and reading test scores.

2.2.4 Data Analysis

The collected data were analyzed using Pearson Product Moment correlation with the help of SPSS version 25. This type of statistical analysis was used twice. First, it examined the contribution of attitudinal/motivational factors on using strategies in learning reading. Secondly, it was analyzed to measure the predictive power of strategies in learning reading toward reading comprehension skills. The obtained correlation coefficients were interpreted in terms of their significance at either 0.01 or 0.05.

3 Research Results

The findings of the present study are presented in the order of the research questions.

RQ 1. Do attitudinal and motivational attributes correlate with using strategies to learn reading skills? If yes, which attribute correlates the best?

The results of the statistical analysis correlation of the nine measures of attitudinal/motivational factors and the nine categories of reading learning strategies and overall strategies are presented in Table 1. All attitudinal/motivational variables correlated significantly with the general use of reading learning strategies, suggesting that they contributed to their use. In this case, the desire to learn English provided the highest contribution ($r = 251$, $p < 0.01$), and English use anxiety provided the lowest contribution ($r = 0.134$, $p < 0.01$).

Legend: AtNSE = Attitude toward Native Speakers of English, AtLE = Attitude toward Learning English, DtLE = Desire to Learn English, ECA = English Class Anxiety, EUA = English Use Anxiety, IiFL = Interest in Foreign Languages, InstO = Instrumental Orientation, IntO = Integrative Orientation, MI = Motivational Intensity, CPS = Cognitive Processing Strategies, MPS = Metacognitive Processing Strategies, TSSPS = Text/Sentence Structure Processing Strategies, WAS = Word Attacking Strategies, CMS = Comprehension Monitoring Strategies, ELSP = Extralinguistic Processing Strategies, TAUS = Text Aid Utilizing Strategies, PS = Predicting Strategies, SCS = Social Compensation Strategies, ORS = Overall Reading Learning Strategies.

Further inspection of the relationship between attitudinal/motivational factors and reading learning strategy categories suggests that all the nine attitudinal/motivational

Table 1. The Correlation between Attitudinal/Motivational Factors and Strategies in Learning Strategies

| | CPS | MPS | TSSPS | WAS | CMS | ELPS | TAUS | PS | SCS | ORLS |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| AtNSE | .141** | .077* | .247** | .052 | .136** | .084* | .120** | .158** | .104** | .187** |
| AtLE | .183** | .156** | .300** | .152** | .219** | .155** | .144** | .204** | .112** | .235** |
| DtLE | .209** | .183** | .329** | .161** | .230** | .151** | .124** | .242** | .122** | .251** |
| ECA | .151** | .144** | .089* | .076 | .190** | .127** | .101** | .137** | .053 | .154** |
| EUA | .129** | .067 | .133** | .063 | .189** | .084* | .109** | .126** | .029 | .134** |
| IiFL | .118** | .072 | .268** | .091* | .175** | .086* | .076* | .150** | .058 | .156** |
| InstO | .180** | .137** | .160** | .046 | .134** | .142** | .175** | .194** | .136** | .190** |
| IntO | .131** | .124** | .258** | .092* | .142** | .120** | .099* | .137** | .069 | .159** |
| MI | .170** | .163** | .254** | .182** | .184** | .149** | .106** | .148** | .165** | .221** |

** The correlation is significant at the .01 level

* The correlation is significant at the .05 level

factors correlated significantly ($p < 0.01$ or 0.05) with cognitive processing strategies, text/sentence structure processing strategies, comprehension monitoring strategies, extra-linguistic processing strategies, text aid utilizing strategies, and predicting strategies. Meanwhile, metacognitive processing strategies were found not to associate with English use anxiety ($r = 0.67$) and interest in foreign languages ($r = 0.072$). Moreover, the use of word-attacking strategies was not correlated with attitude toward native speakers of English ($r = 0.052$), English class anxiety ($r = 0.076$), English use anxiety ($r = 0.063$), and instrumental orientation ($r = 0.046$). Finally, the use of social compensation strategies was not correlated with four attitudinal/motivational attributes, including English class anxiety ($r = 0.053$), English use anxiety ($r = 0.029$), interest in foreign languages ($r = 0.058$), and integrative orientation ($r = 0.069$).

RQ2. Does the use of strategies in learning reading skills correlate with the learners' perceived reading comprehension skills? If yes, which strategy types correlate the best?

Table 2 contains the results of the data analysis dealing with the correlation between the nine reading learning strategies and perceived reading comprehension skills, as the table shows that the overall use of reading learning strategies correlated significantly with reading comprehension ($r = 0.524$, $p < 0.01$). Furthermore, significant relationships were also detected when each of the nine reading learning strategy categories was correlated with reading comprehension, all of which were significant at 0.01 level. In this case, the most robust correlation coefficient was found between cognitive processing strategies and reading comprehension ($r = 0.519$, $p < 0.01$), and the weakest coefficient was between social compensation strategies and reading comprehension ($r = 0.246$, $p < 0.01$). Meanwhile, the coefficients of the correlation between the other seven reading learning strategies and reading comprehension skill range from 0.299 ($p < 0.01$) for

Table 2. The Correlation between Strategies in Learning Reading and Reading Comprehension

| No. | Reading Strategy Types | Reading Comprehension |
|-----|---|-----------------------|
| 1. | Cognitive Processing Strategies (CPS) | .519** |
| 2. | Metacognitive Processing Strategies (MPS) | .431** |
| 3. | Text/Sentence Structure Processing Strategies (TSSPS) | .469** |
| 4. | Word Attacking Strategies (WAS) | .314** |
| 5. | Comprehension Monitoring Strategies (CMS) | .463** |
| 6. | Extra-linguistic Processing Strategies (ELPS) | .468** |
| 7. | Text Aid Utilizing Strategies (TAUS) | .299** |
| 8. | Predicting Strategies (PS) | .417** |
| 9. | Social Compensation Strategies (SCS) | .246** |
| | Overall Reading Learning Strategies (ORLS) | .524** |

** The correlation is significant at the.01 level

text aid-utilizing strategies to 0.469 ($p < 0.01$) for text/sentence structure processing strategies.

4 Discussion

The discussion explored the position of the present findings relative to the findings of previous studies and their possible implications. The study's first finding highlights the role of the student's attitude and motivation in influencing their use of reading learning strategies. On the concept of motivation, Gardner (1985) defined it as "the combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes toward learning the language" (p. 10). Root (1999) claimed that the effects of motivation on learning are evident in three things: learning perseverance, learning behaviors, and learning achievement. Several previous research studies have also demonstrated the significant role of motivation in predicting the use of learning strategies. For example, Oxford and Nyikos (1989) found that expressed motivational level was the most potent predictor of the learner's willingness to use various strategies ranging from formal rule-related practice strategies to conversational input elicitation strategies. In line with this, Gardner and McIntyre (1992) attributed the differences in learning strategies to the differences in the degree of learning motivation. Wharton (2000), whose study dealt with learners of Japanese and French in Singapore, also found that the degree of motivation provided the most significant main effect on the use of learning strategies. When the relative importance of extrinsic and intrinsic motivation was investigated (Ziaosseini & Salahi, 2008), intrinsic motivation was found to correlate significantly with the choice of language learning strategies, while extrinsic motivation was not. In terms of the correlation between motivation and learning strategy types, Zarei and Elekaei (2013) found that students' learning motivation levels influenced the use of memory, compensation, and practical strategies. However, they did not influence cognitive, metacognitive, and social

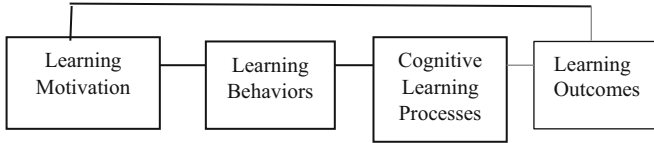


Fig. 1. Motivation-Learning Outcome Chain. List of List of language Components of various motives learning strategies communicative competence. Source: Dörnyei (1996, p. 79).

strategies. In the context of online learning, university students in the Philippines Tus et al. (2021) also reported a significant role of learning motivation that affected learning strategies. To illustrate the role of motivation in second language learning, Dörnyei (1996) proposed a schematic relationship between motivation and learning strategies as well as learning outcomes, as depicted in Fig. 1.

The first finding of the present study is also consistent with the findings of most studies on the relationship between attitude/motivation and reading strategies. Meniado (2016) found that reading interest/motivation correlated positively with reading strategies ($r = 0.374$, $p < 0.01$). Rochmawati et al. (2022) also reported their findings that among Indonesian students at Civil Aviation Polytechnic, a positively significant correlation existed between students' motivation to learn reading and their metacognitive reading strategies ($r = 0.868$, $p < 0.000$). Sani, Chik, Nik, and Raslee (2011) also found that Malaysian undergraduate students' motivation to read significantly influenced the use of reading strategies. A study in Tukey by Ozturk and Aydogmus (2021) also found that reading motivation correlated with analytic strategies ($r = 0.368$, $p < 0.000$), pragmatic strategies ($r = 0.293$, $p < 0.000$), and metacognitive reading strategies ($r = 0.403$, $P < 0.000$). Among Brazilian students, Ferraz, Inacio, Pinheiro, and Santos (2021) learning goals and self-efficacy as aspects of attitudes and motivation correlated significantly with reading strategies, with coefficients being 0.75 ($p < 0.001$) and 0.85 ($p < 0.001$), respectively. On the contrary, Erliana (2015) reported that reading motivation did not correlate significantly with Indonesian university students' reading strategies ($r = -0.001$).

The second finding of the study that the students' use of reading learning strategies correlates with their reading comprehension also supports the generally accepted notion that the learners' choice of learning strategies, both in type and quantity, determines learning outcomes, which may be measured in terms of rate, level of achievement or proficiency (Ellis, 1994). For example, Green and Oxford (1995) found a statistically significant relationship between overall strategy use and proficiency. Wharton (2000) conducted a study with Singaporean learners of Japanese and French and came up with a similar finding that more learning strategy use tends to go with higher proficiency. Yang, Zeng, and Xu (2021) also reported that the use of memory and cognitive strategies affected Brazilian students' proficiency in Chinese as a foreign language.

In the case of the relationship between metacognitive reading strategies and reading comprehension, a few previous studies support the present study's finding. Zare and Othman (2013), for example, reported that reading strategy use by Malaysian ESL learners had a robust positive correlation with reading comprehension achievement ($r = 0.89$, $p < 0.001$). A similar coefficient ($r = 0.87$, $p < 0.000$) of the correlation between

metacognitive awareness of reading strategies and reading comprehension was obtained in a study by Siam and Soozandehfar (2011). Moreover, Lukes (2021) found that greater metacognitive reading strategy awareness moderately predicted higher reading comprehension scores. Rastegar et al. (2017) reported a correlation coefficient of 0.65 ($p < 0.000$) between overall metacognitive reading strategies and reading comprehension achievement. Rochmawati et al. (2022) also reported a strong, positively significant correlation between metacognitive reading strategies and reading outcomes ($r = 0.727$, $p < 0.000$).

On the other hand, some studies failed to reveal a significant correlation between metacognitive reading strategies and reading comprehension (Estacio, 2013; Meniado, 2016). One probable explanation for the insignificant correlation between the two variables is that the students were not yet familiar with the investigated reading strategies, so they did not sufficiently employ those strategies.

The close relationship between metacognitive reading strategies and reading comprehension achievement was even greater in experimental studies. Although some studies fail to prove the effectiveness of reading strategy training (Bentahar, 2012; Janzen, 2003), most of them favor strategy training. Cubukcu (2008), for example, reported that systematic direct instruction of multiple metacognitive reading strategies succeeded to lead an increase in reading comprehension and vocabulary achievement of EFL students in Turkey. Dreyer and Neil (2003) studied the effectiveness of teaching reading strategies in a technology-enhanced higher-learning environment in South Africa. They found that students who received strategic reading instruction got significantly higher scores on three reading comprehension measures, including English reading comprehension, communication reading comprehension, and TOEFL reading comprehension than those who did not. Mistar, Zuhairi, and Yanti (2016) reported the effectiveness of reading strategies training in predicting, text mapping, and summarizing among vocational senior high schools in Indonesia. Thus, Anh and Nam (2019) reported that cognitive reading strategy training improved the reading comprehension achievement of EFL students in Vietnam. Shakoor, Khan, and Majoka (2019) found that teaching reading strategies positively impacted the reading comprehension of students at the higher secondary level in Pakistan. Zhang, Chen, and Yu (2019) also reported that intervention in reading and writing strategies training led to a significant improvement in English reading and writing skills of private university students in China. Finally, Banditvilai (2020) reported that reading strategies instruction positively affects the students' reading comprehension; thus, they had a favorable attitude toward reading strategy training.

The fact that the student's attitude and motivation influence their strategies to learn reading and that their strategies in learning reading affect their reading comprehension entails several implications for reading classroom practices. First, the teachers should teach the students in such a way that the students will develop favorable attitudes toward English learning and strong English learning motivation. Developing a sense of success in English learning on the part of the students will lead to their positive attitudes and strong motivation. Thus, rewards should be utilized in reading classroom practices more than punishment. As such, the students will improve their deployment of strategies in learning reading, since attitude and motivation are found to correlate with reading learning strategies.

Second, the students should be aware of the availability of numerous strategies for learning reading skills. As used in the present study, nine types of reading learning strategies should be introduced to the students. These include 1) cognitive processing strategies, such as using general knowledge and life experience to evaluate the appropriateness of text content and doing a general preview of text organization; 2) metacognitive processing strategies, such as setting a purpose for reading and checking how text content fits reading purpose; 3) text/sentence structure processing strategies, such as anticipating the story line of the text and attending to words and grammar rules that give most significant trouble in reading; 4) word attacking strategies, such as underlining essential words or ideas in the text and scanning unfamiliar words and looking up their meanings in dictionary or glossary; 5) comprehension monitoring strategies, such as monitoring comprehension by questioning or reflecting on information in the text and assessing the degree of understanding of the text content; 6) extra-linguistic processing strategies, such as drawing lines, circles, parentheses, etc. when reading and looking for cohesion markers in text; 7) text aid utilizing strategies, such as referring to pictures or illustration available in reading materials and drawing pictures or illustration based on text understanding; 8) predicting strategies, such as predicting text content based on its introductory paragraph and predicting probable meanings of difficult words found in the text; and 9) social compensation strategies, such as discussing text content with friends when having problems in understanding and constructing hypothetical meanings of the text and testing them while reading.

Lastly, as strategies in learning reading skills were found to correlate with reading comprehension, strategies training should be imposed on reading instruction. Dealing with this, Grabe (2009) suggested that reading teachers apply strategy-based instruction of reading in their everyday reading instruction and work toward automatizing strategy use. To make the reading strategy training effective, the following guidelines should be considered, 1) the training objectives should be clearly explained in the sense that the reading strategies to be trained should be well identified, 2) the use of the trained strategies should be well modeled, 3) good practice and feedback should be provided, and 4) transfer of the trained strategies to new reading tasks should be encouraged (Hudson, 2011). Expectedly, the students will be able to employ effective reading strategies to achieve better comprehension in reading. In short, they will become strategic readers.

5 Conclusions

The present study has successfully proven the significant correlation between attitudes and motivation in reading and learning strategies. Although there are some variations in the significance of the nine individual variables of attitudes and motivation in predicting the use of nine strategies in learning reading, in general, they are all correlated. As such, improving the students' attitudes and motivation to learn will improve the use of strategies for learning reading skills. In turn, it will lead to better reading comprehension since the intensity of using strategies in learning reading correlates significantly with perceived reading comprehension. Thus, more intensive reading learning strategies will improve reading comprehension. However, more studies with experimental designs are called for to provide more valid evidence of the role of reading skill learning strategies in improving reading achievement.

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