

HOW DO ESL STUDENTS STRATEGISE WHEN READING ACADEMIC TEXTS?

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Abstract

Understanding academic texts in English may be challenging for second language learners. It requires a certain amount of effort and appropriate use of reading strategies in order to understand the texts. In order to understand the academic texts, students have to be conscious of the reading strategies that can be used to enhance their level of reading comprehension. Therefore, it is imperative to investigate reading strategies used by students in dealing with academic texts. This study explores Universiti Teknologi MARA students' awareness level of the use of reading strategies when reading academic texts. This study utilises the Survey of Reading Strategies (SORS) by Mokhtari and Sheorey (2002). A total of 157 students from the Faculty of Administrative Science and Policy Studies participated in this study. Findings showed that problem solving strategies are more prevalent among the students compared to support reading strategies and global reading strategies. The findings reveal that the students need to be more exposed to support reading strategies and global reading strategies to further enhance their level of comprehension when reading academic texts.

Keywords: READING STRATEGIES, METACOGNITIVE AWARENESS, PROBLEM SOLVING STRATEGIES, GLOBAL STRATEGIES, SUPPORT STRATEGIES

Introduction

According to Tengku Nor Rizan and Nooreiny (2012), the key passage for learning and acquisition of knowledge is reading because it is regarded to be one of the fundamental skills for learners. Many basic decision making skills involve reading proficiency as well. A competent reader may be able to understand texts better and faster and thus make fast decisions. It is imperative for English as second language (ESL) readers to be conscious of and utilise effective reading strategies in order to read information accurately from print and beyond as pointed out by Tengku Nor Rizan and Nooreiny (2012). According to Hyde (2007), one of the ways to evaluate skilled readers is by assessing their performance on reading tests. He also believes that skilled readers are more likely to achieve better results in subjects like math and science. Therefore, reading proficiently is an essential skill for learners of English to ensure success in learning as it affects learning experiences and performances.

According to Denton et al., (2015) reading comprehension involves the organisation of a complex range of procedures. Denton et al. (2015) emphasise that a reader must interpret words simultaneously. they state that a reader must get word meanings, and generate meaning from sentences and bigger segments of text, while linking new understanding with earlier facts and background knowledge to create an ever evolving mental model of the text, all while keeping track of the meaning and correcting misinterpretations.

To understand complex reading materials, there are multiple factors involved in developing the skill. Hoover and Gough (1990) state that it is imperative to develop basic reading and linguistics skills while Kozminsky and Kozminsky (2001) maintain that general vocabulary and world knowledge play

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important roles in developing reading skills. Perfetti, Landi and Oakhill (2005) suggest developing the skill to adaptably distribute and re-distribute attention to increase reading skills and Botsas and Padeliadu (2003) encourage learners to involve in purposive activities such as reading strategies to improve understanding, monitor meaning, and solve problems. This paper investigates how students engage in purposive activities particularly reading strategies to improve their understanding of reading comprehension monitor meaning and solve problems when reading academic texts.

According to Tengku Nor Rizan and Nooreiny (2012), to understand comprehension texts in the academic context ESL students need to be made aware of the fact that reading includes various actions such as understanding and remembering ideas, recognising and selectively paying attention to key information, monitoring comprehension and learning, synthesising information, as well as critically evaluating the situation. They assert that in order to effectively read comprehension texts, interaction between readers, the text and their strategic actions are imperative. The findings of their study revealed that there are two important features in skilled reading. They are deliberate knowledge (metacognition) and monitoring of the comprehension processes.

Metacognition or metacognitive knowledge refers to a person's awareness about cognition. It means that the person is aware of his/her metacognitive knowledge of cognitive processes and states such as memory, attention, knowledge, conjecture and illusion (Hacker, 1998). Alexander and Jetton (2000) describe that when reading, metacognitive processing is conveyed through strategies which are wilful, essential, procedural, purposeful, effortful, and facilitative in nature. Based on the definitions given, it can be assumed that metacognitive strategies require a reader to allocate a substantial awareness to controlling, monitoring and evaluating the reading process.

Conception of metacognition

Flavell (1976:232), who introduced the term metacognition, referred the term metacognition as "one's knowledge concerning one's own cognitive processes or whatever related to them". Boulware-Gooden, Carreker, Thornhill and Joshi (2007) remarked that the meaning of metacognition is often assumed although it has become a prevalent word in education. Kuhn (2000:178) defined metacognition as "enhancing metacognitive awareness of what one believes and how one knows." He adds that metacognition is a meta-strategic control in application of the strategies that process new information. The process of metacognition includes active monitoring and consequent regulation and arrangement of cognitive processes to achieve cognitive goals (Phakiti, 2003). He added that the notion of thinking about thinking is the basic concept of metacognition. It means that learners are fully aware of what they are currently doing. The ability to understand how cognition works enables us to expand related knowledge and skills in comprehension, argumentation, reasoning and various forms of higher-order thinking (Ku & Ho, 2010). It can be assumed that metacognition is the key element in various forms of higher-order thinking (Ku & Ho, 2010).

Importance of Metacognitive Strategies

According to Livingston (1997), metacognition refers to higher order thinking, which involves active control over the cognitive processes engaged in learning. She added that a lot of activities are metacognitive in nature. Among the activities are planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task. The Literacy Dictionary (Harris & Hodges, 1995:244) described strategy in education as a systematic plan, consciously adapted and monitored, to improve one's performance in learning. Therefore, if students apply metacognitive strategies when reading, it means that the students are able to evaluate whether

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they can understand texts or not. Once they have evaluated their comprehension level, they deliberately carry out a systematic plan to improve their reading performance.

Students' comprehension cannot be enhanced by merely reading more texts (Pressley et al., 1998). Pressley and colleagues (1998) highlighted that in order to improve students' understanding of the texts they read, appropriate reading strategies need to be used. They claimed that if students apply appropriate reading strategies, comprehension will be greatly improved. From the literature, it can be assumed that metacognitive strategies are vital for students to understand texts. As mentioned by Boulware-Gooden, Carreker, Thornhill and Joshi (2007), by applying metacognitive strategies before, during and after reading, students are able to understand the way they think and solve problems.

Past Studies on Reading Strategies

Tengku Nor Rizan and Nooreiny (2012) explored metacognitive reading strategies among undergraduate students. Their study reported a high use of global reading strategies with mean score of 3.5 and above. They claimed that the respondents demonstrated ability of organising their thoughts for reading. The findings of the study showed that the students were conscious of the strategies and utilise them frequently to monitor their reading comprehension. The most frequently used strategies are problem solving strategies ($M=4.10$) followed by global reading strategies ($M=3.73$) and support reading strategies ($M=3.38$).

Jafari and Shokrpour (2012) investigated the reading strategies of Iranian ESP students when they read authentic expository texts in English. Their study had also used SORS by Mokhrati and Sheorey (2002) to measure the students' reading strategies. They compared reading strategies used by students from three majors - midwifery; occupational health and safety; and environmental health. The findings revealed that the most frequently used category of the reading strategies was support strategies ($M = 3.72$), followed by global strategies ($M = 3.24$) and problem solving strategies ($M = 3.14$). They identified four possible factors that influence the use of problem solving strategies among students. The factors are: 1) the type of students used in the study, 2) their native language, 3) learning environment and contexts and 4) participants' inability or unwillingness to use these problem solving strategies. The findings showed that problem solving strategies were the least used strategies. It seemed that the students prefer to use basic support reading mechanism to assist them in understanding comprehension texts.

Magogwe (2013) explored metacognitive awareness level of University of Botswana students in the Faculty of Social Sciences. He used the Survey of Reading Strategies Questionnaires (SORS) developed by Mokhrati and Sheorey (2002) and semi structured interview technique to collect data. The results showed the majority of the students thought they were proficient in reading. The SORS results demonstrated high use of problem solving strategies ($M = 3.97$), medium use of global reading strategies ($M = 3.42$) and medium use of support reading strategies ($M = 3.42$) based on Oxford and Burry-Stock's (1995) averages for measuring general language learning strategies. Magogwe (2013) identified five essential skills to be emphasised in class – guessing and evaluating content; using typographical features; summarising text; using reference materials; and interrogating text. He added that it is also important for lecturers to identify what types of reading strategies to teach in class and find out how these strategies can be applied in different contexts.

Veloo, Rani, and Hariharan (2014) compared the use of metacognitive reading awareness between genders. They found that female students used problem solving strategies, support reading strategies and global reading strategies more than male students. The results showed that global reading strategies are the least favourable strategies. However, it should be noted that there is a significant difference

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between the number of male participants (N=97) and female (221) participants. This may affect the overall results of the study.

Purpose of the study

The purpose of this study, therefore, is to explore self-reported reading proficiency and overall use of metacognitive reading strategies of UiTM Seremban students. It seeks to fulfil the following objectives.

1. To identify the self-reported reading proficiencies of the UiTM Seremban students in the Faculty of Administrative Science and Policy Studies/*Fakulti Sains Polisi dan Pentadbiran (FSPPP)*.
2. To investigate the students' overall use of metacognitive reading strategies (problem solving strategies (PROB); support reading strategies (SUP); global reading strategies (GLOB)).

Research instrument

This study uses the *Survey of Reading Strategies* (SORS) developed by Mokhtari and Sheorey (2002), which is intended to measure adolescent and adult English as Second Language (ESL) students' metacognitive awareness and perceived use of reading strategies, which are defined as mental plans, techniques, and actions taken while reading academic or school-related materials. The instrument is developed based on the *Metacognitive-Awareness-of-Reading-Strategies Inventory* (MARSI) by Mokhtari (1998-2000). MARSI differs from SORS because it is a tool for measuring native English speaking students' awareness and use of reading strategies while reading academic or school related materials instead of measuring second language speakers of English.

The instrument is divided into 4 categories – Global Reading Strategies (GLOB), Problem-Solving Strategies (PROB), Support Reading Strategies (SUP) and demographic data. The first category is global reading strategies, which contains a set of strategies which are related to global analysis of the text. Global reading strategies involve behaviours such as analysing and evaluating information, having purpose in mind when reading, checking own understanding when encounter new information and using contextual clues. This category is represented by 13 items (numbered 1, 3, 4, 6, 8, 12, 15, 17, 20, 21, 23, 24, 27).

The second category is problem-solving strategies, which are applied when text turns hard to comprehend. The strategies include adjusting speed according to type of texts, reading slowly and carefully to understand texts, paying closer attention to the texts and getting back on track when losing concentration. These strategies equip readers with means that help readers to steer through text proficiently. When problems arise in comprehending the information in the text, these particular focused problem-solving or repair strategies will be used (Mokhtari and Reichard, 2002). Problem-solving strategies are represented by 8 items (7, 9, 11, 14, 16, 19, 25, 28).

The third category is support reading strategies. This category is oriented around note taking, paraphrasing, reading aloud, translating into native language and other practical strategies that are described as functional or support strategies. These strategies give practical support mechanisms at sustaining responses to reading such as the use of dictionaries (Mokhtari and Reichard, 2002). Support reading strategies are represented by 9 items (2, 5, 10, 13, 18, 22, 26, 29, 30).

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The last category is demographic data, containing gender and self-rated reading proficiency level. The demographic data information is requested by the researcher for extra information from the respondents.

Methodology

This study was administered to all first semester diploma students of Faculty of Administrative Science and Policy Studies in the Universiti Teknologi MARA, Seremban 3 branch. This study was conducted during semester 1 session 2015/2016. The questionnaires were distributed to 163 students. A total of 157 questionnaires were accepted and 6 were rejected as there were missing items in the returned questionnaires. From a total of 157 respondents, 67.5 per cent of these students were female and 35.5 per cent were male. The students were selected through purposive sampling.

The average Cronbach's alpha coefficient of the instrument – Survey of Reading Strategies Questionnaire (SORS) was 0.908, indicating a good internal consistency or reliability. According to Mokhtari and Sheorey (2002), students who use GLOB are those deliberate, carefully planned techniques by which learners monitor or manage their reading; PROB are the actions and procedures that readers use while working directly with the text and SUP are basic support mechanisms intended to aid the reader in comprehending the text, such as using a dictionary and taking notes.

The researcher administered the questionnaires to all Faculty of Administrative Science and Policy Studies students taking ELC120: Integrated Language Skills – Listening. ELC120 is the first level of English proficiency paper the students have to take for their diploma programme. Clarification of questions was made before they start answering the questionnaires. They were also encouraged to ask for clarifications if they did not understand the statements in questionnaires. The students were requested to colour the number that applied to them, indicating the frequency with which they used the reading strategy described in the statement. The questionnaires were completed by the students under the researcher's supervision.

For general reading strategy usage, Oxford and Burry-Stock (1995) proposed three levels of reading strategy. The three levels are high (mean of 3.5 or higher), moderate (mean of 2.5 to 3.4) and low (mean of 2.4 or lower). These usage levels offer a convenient standard that can be used for interpreting the average scores obtained by students. This study followed the proposed levels to measure the respondents' reading strategy usage. The scores obtained should be interpreted using the high, moderate, and low usage designations. As a general rule, the overall score averages indicate how often students believe they use the strategies in the instrument when reading academic materials. The averages for each category in the inventory show the mean frequency with which students use a given category of strategies when reading academic materials. This information serves as a useful means of raising learners' awareness of their reading processes when reading. For instance, a very low score on any of these strategy groups or categories indicates that there may be some strategies in these categories that they might want to learn about and consider using when reading.

Results and Discussion

First, this study sought to examine the self-reported reading proficiencies of the UiTM Seremban 3 students in the Faculty of Administrative Science and Policy Studies/Fakulti Sains Polisi dan Pentadbiran (FSPPP). The results show that 3.8% rated their reading as excellent, 52.2% as good, 43.6% as moderate and 0.6% as poor. Students were briefed to rate themselves whether they were good or bad at reading academic materials. Four scales from poor, moderate, good to excellent were

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given to them to choose. This means that the majority of students in this study (56%) thought they were proficient in reading while 44.2% were either moderate or poor. Based on the findings, it seemed that majority of the students were confident that they were good at reading academic texts.

The next research question sought to explore the students' overall use of metacognitive reading strategies proposed by Mokhtari and Sheorey (2002). The findings in Table 1 revealed that the overall mean for problem solving strategies is 3.76 (high). The findings indicated that the diploma students from Faculty of Administrative Science and Policy Studies were high strategy users of problem solving strategies. Most students reread difficult texts to increase their understanding ($M = 4.18$). This may be because they were explicitly and repeatedly taught to use the skill when reading difficult texts. The students who also paid closer attention when texts become difficult ($M = 4.04$) were the second most frequently users of this strategy. The students also read slowly and carefully to make sure they understand what they were reading ($M = 3.82$). This may be because strategies no 7, 14 and 25 were closely connected to each other. When the students reread difficult texts, it means that they paid close attention to the difficult texts and these made them read slower and more carefully. The findings were in line with a study conducted by Magogwe (2013) on University of Botswana English as Second Language students, which revealed a high level of problem solving strategies ($M = 3.97$) usage. This showed that problem solving strategies were often used by the ESL learners. The findings may be similar because the students were from the social science faculty and the method used to collect data of both studies was similar. Likewise, the study conducted by Jafari and Shokrpour (2012) on the students of environmental health, occupational health and safety, and midwifery at Shiraz University of Medical Sciences showed a moderate usage ($M=3.14$) compared to the findings of the diploma students from Faculty of Administrative Science and Policy Studies reading strategies ($M=3.76$; high). This inconsistency may be due to different types of respondents and methods used in the study. Jafari and Shokrpour (2012) studied medical science students and conducted a reading comprehension test prior to distributing the questionnaires.

Table 1: Problem Solving Strategies

Strategy	Problem Solving	M	SD
7	I read slowly and carefully to make sure I understand what I am reading.	3.82	1.016
9	I try to get back on track when I lose concentration.	3.90	.861
11	I adjust my reading speed according to what I am reading.	3.55	.996
14	When text becomes difficult, I pay closer attention to what I am reading.	4.04	.876
16	I stop from time to time and think about what I am reading.	3.34	.958
19	I try to picture or visualise information to help remember what I read.	3.65	.953
25	When text becomes difficult, I reread it to increase my understanding.	4.18	.820
28	When I read, I guess the meaning of unknown words or phrases.	3.61	.931
Overall Mean		3.76	-

N = 157

M, mean; SD, standard deviation

The third research question sought to identify the usage of support reading strategies among first semester diploma students of Faculty of Administrative Science and Policy Studies. Table 2 shows moderate use of support reading strategies with overall mean of 3.47. The most frequently used support strategy was by using reference materials such as dictionaries ($M = 3.84$) followed by underlining or circling information ($M = 3.82$) and translating texts into native language ($M = 3.57$). Although there were four items indicating high level of usage, the remaining five items scored very low (see Table 2). These results were consistent with other research findings by Magogwe (2013), who found that ESL

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learners' usage of support reading strategies was also moderate with overall mean of 3.42. The similarities of the results may be explained by the fact that both studies collected data without giving any tests prior to distributing the questionnaires. The questionnaires were answered based on the respondents' experience when reading academic texts in general. The experience referred to was not specific to certain type of text only.

However, the findings of the current study differ from the study by Jafari and Shokrpour (2012), which showed high ($M=3.72$) usage of support reading strategies. These rather contradictory results may be due to different style of data collection carried out by the authors. Jafari and Shokrpour (2012) distributed the questionnaires after they administered a reading comprehension test. The respondents were instructed to answer the questionnaires based on the strategies they used when answering the test. These differences may have influenced the findings of the studies.

Table 2: Support Reading Strategies

Strategy	Support Reading	M	SD
2	I take notes while reading to help me understand what I read.	3.20	.939
5	When text becomes difficult, I read aloud to help me understand what I read.	3.50	1.164
10	I underline or circle information in the text to help me remember it.	3.82	1.061
13	I use reference materials (e.g. a dictionary) to help me understand what I read.	3.84	1.089
18	I paraphrase (restate ideas in my own words) to better understand what I read.	3.47	.958
22	I go back and forth in the text to find relationships among ideas in it.	3.32	.942
26	I ask myself questions I would like the text to answer.	3.07	.975
29	When reading, I translate from English into my native language.	3.57	1.087
30	When reading, I think about information in both English and my mother tongue.	3.47	1.029
Overall Mean		3.47	-

N = 157

M, mean; SD, standard deviation

The fourth research questions sought to investigate the usage of global reading strategies (GLOB). Table 3 reveals that global reading strategies are the least frequently used strategies with overall mean of 3.30. The results were consistent with both Jafari and Shokrpour (2012) and Magogwe (2013) studies, in which both studies showed moderate usage of global reading strategies with means of 3.14 and 3.42, respectively. The findings from the three studies suggested that global reading strategies were the least prevalent strategies used by the students. A possible explanation for this might be that the students were not exposed to listed strategies. Another possible explanation for this is that the students might think that the strategies were not important when reading academic texts.

Table 3: Global Reading Strategies

Strategy	Global Reading	M	SD
1	I have a purpose in mind when I read.	3.29	.803
3	I think about what I know to help me understand what I read.	3.56	.827
4	I take an overall view of the text to see what it is about before reading it.	3.36	1.032

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6	I think about whether the content of the text fits my reading purpose.	3.06	.782
8	I review the text first by noting its characteristics like length and organisation.	2.85	1.005
12	When reading, I decide what to read closely and what to ignore.	3.22	.917
15	I use tables, figures, and pictures in text to increase my understanding.	3.45	1.100
17	I use context clues (evidence or hints from background knowledge) to help me better understand what I am reading.	3.52	.844
20	I use typographical features like bold face and italics to identify key information.	2.91	1.094
21	I critically analyse and evaluate the information presented in the text.	2.97	.824
23	I check my understanding when I come across new information.	3.62	.813
24	I try to guess what the content of the text is about when I read.	3.69	.806
27	I check to see if my guesses about the text are right or wrong.	3.46	.917
Overall Mean		3.30	-

N = 157

M, mean; SD, standard deviation

The last research question sought to identify five least frequently used strategies by the students to read academic texts. Table 4 shows that most students were not familiar with global reading strategies, which explains why it had the lowest overall mean as compared with two other strategies. The findings reveal that the students might not be aware of global reading strategies. Another possible explanation is that the students might not have been explicitly introduced to these strategies. Global reading strategies are important in assisting students to comprehend their academic texts. If the students were not exposed and thought the strategies were not important for them, it is imperative for the language instructors to introduce the strategies to the students and put emphasis on the importance of the strategies.

Table 4: Five Least Frequently Used Strategies

Category	Reading Strategy	M	SD	Level
GLOB	I review the text first by noting its characteristics like length and organisation.	2.85	1.005	Moderate
GLOB	I use typographical features like bold face and italics to identify key information.	2.91	1.094	Moderate
GLOB	I critically analyse and evaluate the information presented in the text.	2.97	.824	Moderate
GLOB	I think about whether the content of the text fits my reading purpose.	3.06	.782	Moderate
SUP	I ask myself questions I would like the text to answer.	3.07	.975	Moderate

Conclusion

This study illustrates several significant points regarding reading strategies applied by UiTM diploma students in the Faculty of Administrative Science and Policy Studies. Based on the findings, it seems that the students did not fully utilise support reading strategies and global reading strategies. There are

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two possibilities why these two were not favoured by students. Firstly, they might not be familiar with the strategies and secondly, they might not be fully aware of the importance of the reading strategies, particularly global reading strategies.

To solve these problems, UiTM lecturers may introduce the type of metacognitive reading strategies as listed in the questionnaires to the students in the next level of English paper - ELC150: Integrated Language Skills: Reading, which focuses on reading. Lecturers teaching ELC150 at UiTM may instruct strategies explicitly so that the students realise that using reading strategies helps them in comprehending texts and helps them in monitoring and controlling their comprehension. The minimal use of global reading strategies as reported in this study implied that lecturers should raise awareness on global reading strategies such as text evaluation, typographical features, critical analysis and purpose of reading. Lecturers might want to introduce the five least frequently used strategies (see Table 4) to the students and do in-class exercises to improve their reading strategies. Future research may study whether there are any significant improvements after the strategies are explicitly introduced to the students.

In sum, the findings of this study provides UiTM English lecturers with validated information on reading strategies currently used by UiTM FSPPP students. The findings allow lecturers to understand which overall reading strategies are used by the students and which reading strategies to emphasise. The findings can also be a point of reference to other similar ESL situations.

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Biodata

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