



Portfolio Analysis: An Alternative Approach to Clarifying Students' Use of EFL Reading Strategies

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บทความนี้มีจุดมุ่งหมายเพื่อนำเสนอทางเลือกในการวิเคราะห์ข้อมูลที่ได้จากถ้อยความซึ่งถ่ายทอดจากความคิดของผู้อ่านในรูปแบบของการเขียนบรรยายลงในแฟ้มสะสมงานหลังจากผู้อ่านบทอ่านภาษาอังกฤษที่ตนเลือกมา โดยที่หน่วยในการวิเคราะห์นั้นประกอบด้วย 1) ถ้อยความ และ 2) กลยุทธ์การอ่าน เพื่อให้เห็นภาพชัดเจนผู้เขียนได้นำเสนอตัวอย่างการวิเคราะห์ข้อมูลดังกล่าวจากงานวิจัยประเภทกึ่งทดลองระดับปริญญาเอกของผู้เขียนเอง โดยผู้เขียนศึกษาความแตกต่างในการเรียนรู้การใช้กลยุทธ์การอ่านภาษาอังกฤษของนักศึกษาไทยสายวิทยาศาสตร์และเทคโนโลยีที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศระหว่างสามกลุ่มย่อย (สูง กลาง ต่ำ) ซึ่งแบ่งตามระดับความสามารถในการอ่านภาษาอังกฤษก่อนเริ่มการทดลองสอน ผู้เรียนเหล่านี้เป็นกลุ่มตัวอย่างในกลุ่มทดลองที่ได้รับการสอนแบบเน้นการใช้กลยุทธ์การอ่านอย่างหลากหลาย ผู้เขียนวิเคราะห์การเรียนรู้ดังกล่าวจากข้อมูลในแฟ้มสะสมงานการอ่านบทอ่านภาษาอังกฤษจำนวน 30 ชุด (10 ชุดจากแต่ละกลุ่มย่อย) ซึ่งเก็บสะสมตลอดระยะเวลา 16 สัปดาห์ของการเรียนรายวิชาการอ่าน 1 ผลจากการวิเคราะห์พบว่าผู้เรียนทั้งสามระดับสามารถถ่ายโอนกลยุทธ์การอ่านที่เรียนในชั้นเรียนเพื่อปรับใช้กับการอ่านในสถานการณ์อื่นๆ นอกชั้นเรียนได้ นอกจากนี้ผู้เรียนในกลุ่มความสามารถสูงก็สามารถใช้กลยุทธ์การอ่านได้บ่อยกว่า

และในหลากแง่มุมมากกว่าผู้เรียนในกลุ่มที่มีความสามารถในระดับที่ต่ำกว่า ผู้เขียนพบว่าแม้จะมีข้อจำกัดบางประการในการวิเคราะห์ข้อมูลการอ่านจากแฟ้มสะสมงานในลักษณะนี้สามารถใช้ได้ดีในทางปฏิบัติ และสะดวกในการวิเคราะห์และยังเหมาะกับการนำไปใช้ในการประเมินผลการใช้กลยุทธ์การอ่านของผู้เรียนในการเรียนการสอนด้านการอ่าน หรือเพื่องานวิจัยด้านการอ่าน

คำสำคัญ: การวิเคราะห์ข้อมูลการอ่านแบบแฟ้มสะสมงาน การประเมินผลการใช้กลยุทธ์การอ่าน กลยุทธ์การอ่าน การถ่ายทอดความคิดของผู้อ่าน หลังการอ่าน

Abstract

The aim of this paper is to propose an alternative approach to the analysis of readers' verbal report data in the form of retrospective accounts of strategy use (portfolio entries) after reading English passages they chose by themselves. The idea units used for the purpose of this analysis comprise 1) statements provided and 2) reading strategies reported using. By way of illustration, an analysis of 30 portfolio entries of Thai EFL university student readers from science and technology disciplines in the author's quasi-experimental research for his doctoral degree

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(ten in the high reading proficiency group, ten in the moderate and the other ten in the low) was showcased. These subjects were from the experimental cohort, taking the Reading I course and receiving strategies-based instruction for the co-ordinated utilisation of multiple reading strategies for a period of 16 weeks. The results provide some evidence that the reading strategies learned in class were transferred to the learners' other reading situations. Readers with higher-level reading proficiency demonstrated more frequent use of reading strategies and performed better in various aspects of the acquisition of reading strategies than did those with the lower-level reading proficiency. Although some limitations were found, portfolio entries as a data collection method are practical and convenient for analysis. It can also be employed as a form of reading strategy use assessment and a cross-validation or triangulation of the data obtained from other reading research instruments.

Keywords: Portfolio Entry Analysis, Reading Strategy Use Assessment, Reading Strategies, Retrospective Verbal Reports

1. Introduction

Proficient readers engage in a wide range of cognitive and metacognitive strategies. Developmental and classroom intervention researchers are in need of high-quality measures of strategy use and effective analysis methods to identify accurate and thorough readers' verbal reports of strategy use. This important data will reveal thinking processes and comprehension monitoring of readers. It will also reflect how readers assess their own understanding and what strategies are used to facilitate understanding and remove meaning blockages. Studying readers'

comprehension monitoring provides researchers access to readers' reading problems and the way an individual solves his/her own reading problem. Researchers should bear in mind of individual differences and common characteristics for understanding texts. Generally, the data obtained from readers is widely used for research into readers' reading processes. This data can be classified into three types: retrospective verbal reports, concurrent verbal reports and introspective measures.

To effectively analyse the readers' verbal reports in order to reflect their actual responses to the text content, a systematic method of data analysis should be implemented. The paper reported here details an analysis of subjects' retrospective accounts of strategy use, obtained in the form of a collection of portfolio entries. The method employed is, therefore, to analyse retrospective verbal reports of Thai EFL university student readers from science and technology disciplines after they read particular texts.

2. Portfolio Approach

The portfolio is a useful tool for 'the enhancement of instruction and assessment, addressing educators' concerns about authentic assessment, documentation of academic progress and teacher and student involvement' [1] Valencia [2] described the benefits of the portfolio approach, which are aimed specifically at classroom reading assessment. First, the portfolio approach is considered a thorough assessment based on the authenticity of tasks, texts and contexts. Students should be presented with a variety of authentic texts, both in class, out of class and during the assessment with various purposes for reading. Such assessment must consider how the reader, the text and the context interact and how this interaction



affects the construction of meaning. Since these assessment activities are similar to tasks students might perform both in and out of the classroom, they are suitable for use in an assessment situation. Students' integration and application of skills can thus be evaluated in meaningful and authentic contexts. Second, as the portfolio approach involves an ongoing process, it can be used to assess the process of learning over time. That is to say, learning is always evolving, growing and changing, and the portfolio approach is able to capture this process. Third, portfolio assessment is considered multi-dimensional, enabling a wide range of cognitive processes, affective responses and literacy activities to be sampled, and, therefore, appropriate for assessing the complex and multi-faceted process of reading. Moreover, it also covers students' interests and motivations, voluntary reading, and metacognitive knowledge and strategies. Fourth, active and collaborative reflection from teacher and student is required in this assessment approach. Both parties establish a strong bond, and become partners in learning. The criteria and process used for evaluation become meaningful, and provide a model for students to follow to become self-evaluators.

The portfolio approach has been used in many educational contexts for different purposes, including assessment or instruction [1]-[3], teacher education [4], [5], and learner training [6], [7]. According to Valencia and Calfee [1], there are three distinctive models for individual student portfolios. The showcase portfolio represents a collection of a student's best and favourite work, with his/her self-reflection, self-evaluation and self-selection. The documentation portfolio systematically records a student's ongoing progress. It may contain

observations, checklists, anecdotal records, interviews and classroom tests, as well as performance-based assessments. The evaluation portfolio consists of a predetermined, standardised measure from the teacher or school, with criteria for scoring and evaluating performance. Even though the strengths and weaknesses of portfolio use in research have not been discussed widely, it is considered a beneficial tool for discovering the process of learning and using strategies [6].

3. Collection of Readers' Retrospective Verbal Reports

The question now is how the readers' retrospective verbal reports for portfolio entry analysis can be collected. To illustrate this, the procedures the author used with his experimental cohort as part of a larger quasi-experimental research [8] are described here. This involves only analysing portfolio entries that contain retrospective reports of participants' use of strategies when reading English texts of their own choosing. The participants in this group were 82 second to fourth-year Thai EFL undergraduates in scientific and technological disciplines, namely mechanical, electrical, civil and production engineering, industrial management, computer science and information technology at King Mongkut's University of Technology North Bangkok (KMUTNB) from four existing classes of the Reading I course for the second term of the 2008 academic year. These participants were taught, using a strategies-based approach, by the author and a trained assistant (a colleague at the same university), each teaching two classes for a period of 16 weeks. The focus was on the explicitness of the teacher's instructional talk on the co-ordinated use of multiple strategies for effective comprehension of English



texts. The curriculum included 14 bottom-up and 16 top-down reading strategies which were prescribed in 17 handouts as well as 11 metacognitive, 3 social/affective and 2 test-taking strategies which were activated in class. The curricular goal was for readers, when they actively seek to comprehend English texts, to (a) know multiple strategies for facilitating their reading, (b) select specific strategies and (c) use those strategies to ease their reading difficulties. This part of the author's study, then, sought to answer these two research questions:

1. Are the learners able to transfer the learned strategies to their English reading processes?
2. Are there any similarities and differences in how the different proficiency sub-groups learn to use EFL reading strategies?

In terms of research instrument, the author followed Ikeda and Takeuchi [9] with their permissions, using the portfolio entry as 'an instructional tool that purposefully documents a series of learner's work with [his/]her reflections on that work'. Designed as out-of-class assignments with marks provided, the purpose of the portfolios was to capture the student readers' reading strategy use and how the different reading proficiency groups (high, moderate, low) learned to use EFL reading strategies. These portfolios also share three characteristics, as proposed by Danielson and Abrutyn [3]: they are purposeful, they are collections of the learner's work, and they include the learner's reflections on his/her work. Each participant was instructed to produce a weekly portfolio entry of his/her own for 11 weeks. Totally, each person had to submit 11 entries and 902 entries from 82 participants were finally collected. In each entry, the participants were required to describe how

they used the reading strategies taught in class, when they read an English text on their own (See for an example in the author's thesis [8]). After the third week, individual subjects were encouraged to use the strategies taught in the preceding weeks. In composing an entry for the portfolio, the participants were asked to: 1) find an English passage on their own which was suitable for using the strategies taught in the preceding class, 2) attach the passage to the left side of an A4 sheet, 3) read the passage, 4) record retrospective accounts on the right side of the entry, describing how they had utilised the strategies taught in the classroom while reading the passage attached to the portfolio, and what opinions they had on using those strategies. The participants were allowed to use their L1 (ie Thai) in their entries, in order to obtain precise information on their strategy use, without giving them more work with L2 processing. It was required that a complete entry be submitted weekly. All submitted entries were perused by the author and two colleagues. Well-produced entries were selected and shown to all subjects in the next class, reinforcing that it was important for learners to provide meaningful descriptions about their own strategy use [10]. This was also a way to share the experiences of more proficient strategic readers [9]. Additionally, the instructors responded to all submitted entries in writing, commenting on the documents, encouraging strategy use, and responding to the content of reflections [6]. Six questions, adapted from Auerbach and Paxton [11], were also added to the portfolio entry assignment to gain further insight into the students' reading process and set as criteria for considering well-produced entries.



4. Components for Analysing Verbal Reports

4.1 Statement

Statements, in the author's study, are regarded as utterances, stated or declared by student readers but recorded in the form of written communication. These messages reflect readers' responses to the content of the texts they read. After reading a particular sentence or portion of the text, a reader may express his utterance in the form of written words, phrases or sentences.

4.2 Strategy

The term 'strategy' is defined as 'the idea of an agent about the best way to act in order to reach a goal' [12]. Reading strategies, which are the main focus of this study, are encompassed by language learning strategies, which 'are for the most part unobservable, though some may be associated with an observable behaviour' [13]. Like other language learning strategies, reading strategies are identified through learners' verbal reports while they are engaged in reading tasks, as their mental processes cannot be captured by direct observation [14]-[17].

Reading strategies have been defined in various ways by researchers. Some definitions are confined to the notion of purposeful, conscious efforts. Kletzien [18] notes that reading strategies are deliberate means of constructing meaning from a text, when comprehension is interrupted. Olshavsky [19] regards reading strategies as a purposeful means of comprehending the author's message. Pritchard [20] views reading strategies as deliberate actions that readers take voluntarily to develop an understanding of what they read. Abbott [21] defines reading strategies as 'the mental operations or comprehension processes that readers select and

apply in order to make sense of what they read'.

Nevertheless, some definitions are not limited to the notion of conscious effort on the part of the reader. For example, Anderson [22] added that reading strategies may be used without readers' awareness, particularly if the material being read is not difficult. According to Davies [23], reading strategies are physical or mental actions which are used either consciously or unconsciously to comprehend text. She explains that in a normal reading situation, readers use many reading strategies automatically. However, when it comes to an experimental situation, they are asked to report these strategies in terms of their conscious efforts.

Adapting these definitions to the context of reading instruction, reading strategies are seen as deliberate actions, consciously taken by the student readers to enhance their reading comprehension. Basically, reading strategies are not good or bad, but they tend to be employed efficiently or inefficiently in different contexts [24], [25]. Utilisation of reading strategies is controlled by readers' metacognitive awareness of the strategies and the way in which the strategies can be executed for maximum effectiveness in dealing with comprehension matters [24], [26]. Moreover, reading strategies can facilitate reading comprehension and they can be taught [27]. Once reading strategies are learned up to the automatic level, they become skills. Thus, learners need to know both which strategies to use as well as when, where and how to use them [28], [29].

In the analysis of the retrospective accounts of strategy use in the author's research, the author adopted 46 identified strategies, which were added to the categorisation scheme of reading strategies by



L1 and L2 reading researchers in the literature such as bottom-up (14 strategies), top-down (16 strategies), metacognitive (11 strategies), social/affective (3 strategies) and test-taking strategies (2 strategies) [14], [21], [30]-[33]. These strategies were explicitly taught as ‘flexible plans for reasoning about how to remove blockages to meaning ... [which can be]... applied thoughtfully, consciously, and adaptively’ [34] to the experimental classes and listed in the categorisation and definition of reading strategies for analysis.

5. Analysis of Verbal Reports

The next question will be how the students’ verbal reports collected from the portfolio entries can be analysed. In the author’s study, the participants’ verbal reports were collected from 30 portfolio entries (i.e. 10 entries randomly selected from 5 assignments of each reading proficiency group). The author, together with his two colleagues first analysed the collected verbal reports to identify the retrospectively-reported reading strategies by comparing, coding and categorising the strategies the participants reported according to the categorisation and definition of 46 reading strategies compiled from the literature. Each statement expressed in each portfolio entry was examined to identify an idea unit and a strategy or how that particular participant did to comprehend the text. That is, the participant’s reaction to the text was considered to see how he/she could deal with the meaning (i.e. using reading strategies; for example, using knowledge of grammar, summarising text information or elaborating on prior knowledge). Examples can be seen from the results in section 6.1.

The author further analysed the same set of data to reveal the learners’ process of learning EFL reading strategies, following the framework of the portfolio entry analysis conducted by Ikeda and Takeuchi [9], which consisted of six aspects for consideration, namely 1) number of descriptions, 2) participants’ understanding of the purpose and merit of each strategy, 3) participants’ understanding of the conditions in which each strategy is used effectively, 4) participants’ understanding of how to use more than one strategy in combination, 5) participants’ knowledge of when to use each strategy effectively and 6) participants’ understanding of how to assess whether a strategy is effective. The author added another three aspects for analysis, which included 1) the manner in which strategies and their use were described, 2) the expressions of background knowledge and 3) the expressions of autobiographical responses. The descriptions in all entries were grouped according to their similarities and differences, and counter-checked by the research team. Any discrepancies were discussed and resolved.

6. Examples of the Analysed Verbal Reports

To support the portfolio entry analysis the author has proposed in this paper, examples of the analysed verbal reports from the 30 randomly-selected portfolio entries are cited here.

6.1 Identified Reading Strategies from the Learners’ other Reading Situations

This is to answer Research Question 1 whether the learners are able to transfer the learned strategies to their English reading processes. The descriptions



in each portfolio entry were categorised into reading strategies which were further grouped to find their frequency distributions. The retrospective accounts of strategy use revealed that the participants employed a variety of strategies to facilitate reading English texts of their own accord (see Table 1).

As shown in Table 1, out of 46 strategies explicitly taught and activated in class, a total of 34 strategies were identified from the analysed portfolio entries, covering five major strategy types, which are discussed in turn as follows:

Bottom-up Strategies

According to Oxford [35], there are two major (interrelated) classes of language learning strategy: direct strategies and indirect strategies. Direct strategies are used to tackle the target language itself in various tasks and situations (bottom-up and top-down), whereas indirect strategies are used for the general management of learning (metacognitive and social/affective).

In a bottom-up model, reading is considered a text-based or data-driven decoding process [36] or ‘a linear process from graphic symbols to meaning

responses’ [37]. During this decoding process, the reader tries to rebuild the meaning of the text, progressing from the smallest textual elements (eg individual words, sound patterns, syntactic structures) to connected words and larger syntactic units (eg sentences), until comprehension of the text is complete [37], [38]. According to the bottom-up model, meaning resides in the text. Therefore, irrespective of their individual characteristics, readers are passive recipients who will interpret the text in the same way, as meaning is inherent to the text, rather than something constructed by the reader [36]. Thus, the bottom-up decoding process is heavily dominated by the use of local, language-based reading strategies that focus primarily on word recognition, word-for-word translation, syntax, or text details [21]. In their retrospective accounts, the participants frequently reported using strategies associated with lower level processing when they read English texts. This may be because Thai students are accustomed to the bottom-up model of reading which has typically been used in Thailand. Teachers of English usually follow a text-based or data-driven approach, and emphasise bottom-up,

Table 1 Frequencies of reading strategies identified in the portfolio entries of the experimental group participants

#	Strategy	Number of Strategies Identified	Experimental Cohort Frequency of Strategy Use			Total	
			H	M	L	Frequency	%
1	Bottom-up strategies	11	57	34	27	118	40.41%
2	Top-down strategies	11	52	29	12	93	31.85%
3	Metacognitive strategies	10	30	29	19	78	26.71%
4	Social/affective strategies	1	0	0	1	1	0.34%
5	Test-taking strategies	1	0	2	0	2	0.68%
Total		34	139	94	59	292	100.00%
			47.60%	32.19%	20.21%	100.00%	



local reading strategies for reading English [38]. The participants' retrospective reports indicate that they tried to master the hierarchical sub-skills through their language-based processes, in order to construct meaning from the text.

Top-down Strategies

In a top-down model [39], [40], reading is viewed as 'a hypothesis-driven process' [37] in which meaning and comprehension rely on the reader's general conceptions about the text and their predictions of what the text will be about [38]. As top-down models involve readers' world knowledge, experience, interests and expectations, the interpretation of a particular text in the top-down reading process may differ between readers [38]. The significance of the reader's prior knowledge in the reading process can be described using schema theory [38], which posits that the interaction between the reader's background knowledge and the text is crucial for effective reading. Therefore, the top-down reading process involves global, knowledge-based reading strategies that are primarily concerned with text gist, background knowledge, or discourse organisation and which are associated with attending to higher level elements [21].

Metacognitive Strategies

The metacognitive strategy group (planning, monitoring and evaluating) is involved in co-ordinating the learning process [35]. Metacognitive reading strategies, which are concerned with self-management or self-regulation in a given reading task, have a strong effect on cognitive reading strategies in the readers' reading performance, whereas cognitive reading strategies, which are related to the target

language and world knowledge of the readers, enable readers to construct meaning from a text and to perform a given reading activity [32], [37]. As efficient reading is based on readers' metacognitive knowledge (what one knows), metacognitive skill (what one is currently doing) and metacognitive experience (what one's current cognitive or affective state is) [37], proficient readers who can use these characteristics of thinking, or metacognitive elements, are able to perform reading tasks effectively. That is, they set objectives before starting to read, pose questions to themselves and find the answers while reading, and reflect on what they have read. In this study, metacognitive reading strategies are defined as activities that good readers employ to plan, control, monitor and evaluate their comprehension. However, the study participants reported using metacognitive reading strategies less frequently than might be expected.

Social/Affective Strategies

The social and affective strategy groups concern both intrapersonal and interpersonal interactions [35]. Social strategies involve the actions which learners choose to take when they interact with other learners to accomplish the common goal of learning tasks, or when they interact with native speakers to clarify social roles and relationships, whereas affective strategies serve to regulate learners' emotions, motivation and attitudes, in order to redirect negative thoughts about their abilities to perform the learning tasks [14], [15]. The social/affective reading strategies identified in this study involve activities the participants perform when interacting with another person to assist reading, or when co-operating with peers to achieve a common



goal in reading. These also involve the use of affective control (attitudes or feelings) to assist in reading tasks or to change a learner's negative attitude about his/her ability to perform a reading task with assurances that he/she can accomplish the task. In this study, however, it was found that the participants rarely interacted with others to assist their reading. Moreover, only two participants reported that they reduced anxiety by using mental techniques that make them feel competent to perform the reading task (2, 0.34%).

Test-taking Strategies

Test-taking strategies refer to the test-taking processes that test-takers have selected and are consciously aware of [14]. Some test-takers may have recourse to test-wiseness strategies which are not determined by competence in the target language being tested. Some test respondents may try to find information in the passage which is similar to one of the response choices, whereas others may not read the whole text, but may instead scan it for the answers to the given reading comprehension questions. Test-taking reading strategies in this study are confined to the conscious mental and behavioural activities that the participants undertake to achieve reading testing tasks. The function of these individual strategies is to assist readers as test-takers in dealing with difficult texts and comprehension-testing questions in any kind of English test. Only very low frequency use of test-taking reading strategies was reported in this study.

6.2 Identified Process of Learning to Use EFL Reading Strategies

Research Question 2 was set to find out possible similarities and differences in how the

different proficiency sub-groups learn to use EFL reading strategies. The author further analysed the collected verbal reports by investigating how the different reading proficiency groups learned to use EFL reading strategies according to the criteria set earlier. Nine areas of similarity and/or difference were identified among participants in the high- (H), moderate- (M) and low-level (L) sub-groups.

First, a similarity was found in the number of individual strategies reported in each of the portfolio entries. Participants in all reading proficiency sub-groups demonstrated similar patterns in reporting on the use of more than one strategy in one portfolio entry (H = 10, M = 10, L = 10). However, a difference was found in the descriptions of single strategy use. Participants in the high- and moderate-level sub-groups tended to describe the use of strategies in full detail in most portfolio entries submitted (H = 10, M = 7, L = 2). On the other hand, the low-level reading proficiency sub-group participants tended to report on the use of an individual strategy with little detail in each entry (H = 0, M = 3, L = 8).

Second, a difference was found in participants' understanding of the purpose and merit of each strategy used. Participants in the high- and moderate-sub-groups tended to describe each strategy used in a way that showed their understanding of the purpose and merit of using that particular strategy well (H = 5, M = 6, L = 3). On the other hand, participants in the low-level sub-group did not demonstrate a real understanding of the purpose and benefits of strategy use in most of the portfolio entries they submitted (H = 5, M = 4, L = 7). They appeared to read the texts primarily for the purpose of using the strategies taught.

The third difference found is participants'



understanding of the conditions in which each strategy is used effectively. However, few of the portfolio entries from all sub-groups demonstrated the participants' understanding of the conditions for effective use of strategies. Only a few portfolio entries from the high- and moderate-level sub-groups revealed such understanding. On the other hand, no portfolio entry from the low-level sub-group demonstrated that the participants sufficiently understood the conditions for using the strategies taught ($H = 1, M = 2, L = 0$). Almost all of the submitted entries showed their no understanding ($H = 9, M = 8, L = 10$).

Fourth, a similarity was found in participants' understanding how to use more than one strategy in combination. Participants in all three sub-groups demonstrated evidence of the combined use of more than one strategy in almost every entry submitted ($H = 9, M = 10, L = 9$).

Fifth, a difference was found in participants' repeated use of a strategy. Participants in the high- and moderate-level sub-groups tended to use the same strategy again in the same text more frequently than those in the low-level sub-group ($H = 10, M = 9, L = 4$). With regard to using the same strategy again in a different context, no difference was found, as participants in all sub-groups showed a similar frequency of such use in their entries ($H = 8, M = 9, L = 10$).

Sixth, a difference was found in participants' understanding of how to assess whether a strategy is effective. Participants in all sub-groups tended not to confirm the degree of their understanding achieved by the use of a strategy. However, those in the low-level sub-group tended to evaluate the effectiveness of the strategy used by consulting

outside resources such as dictionaries slightly more often than did their peers in higher-level sub-groups ($H = 2, M = 1, L = 4$). Some of these participants used the strategy 'using local context clues to interpret a word or phrase' and confirmed whether the strategy used was effective or not by consulting a dictionary as an outside resource. Participants in the high- and moderate-level sub-groups, on the other hand, tended to assess the efficacy of the same strategy with no such confirmation ($H = 8, M = 9, L = 6$). It may be the case that the higher-level readers did not have to confirm whether their guesses were correct, because they were confident that they were right.

Seventh, a similarity was found in the manner in which strategies and their use were described. Most portfolio entries from all sub-groups contained exact descriptions of strategy use ($H = 9, M = 8, L = 9$). Only a few entries contained inexact descriptions of strategy use – one entry from the high-, two from the moderate- and one from the low-level sub-groups.

Eighth, a difference was found in participants' expressions of background knowledge. Participants in the high-level sub-group tended to write about their background knowledge in more detail in the portfolio entries than did those in the moderate- and low-level sub-groups ($H = 6, M = 3, L = 4$). More than half of the portfolio entries from the moderate- and low-level sub-groups provided few details of what the participant readers brought to the act of reading ($H = 4, M = 7, L = 6$).

Finally, a difference was found in the descriptions shown in the assignments of autobiographical responses. Many portfolio entries from the high-level sub-group had detailed descriptions of the



participants' personal reflections, experiences and emotions and attitudes relevant to what they had read. The participants in this sub-group provided more full and detailed descriptions than the other sub-groups in their autobiographical response assignment (H = 7, M = 3, L = 1). On the other hand, descriptions with few autobiographical details were widely found in the portfolio entries from the low-level sub-group (H = 3, M = 7, L = 9).

In general, the high-level sub-group members of the experimental group displayed six outstanding performances and those in the moderate-level sub-group demonstrated four outstanding performances in learning to use EFL reading strategies, whereas their counterparts in the low-level sub-group displayed one outstanding performance.

7. Conclusion and Implications

Based on the above exemplified data analysis, the author hopes that using portfolios as a data collection method can be an optional, useful tool to reveal the learners' strategy use and the process of strategy training, particularly for an improvement in second or foreign language reading comprehension skills. The portfolio entries, or the retrospective accounts of strategy use the author proposed here, were used first to assess the students' reading strategy use and second to investigate the students' reading processes when they read English materials out of class. Each portfolio entry collected recorded the details of a learner's task with his/her reflections on that task. Such task comprised an English text fastened to the left side of each portfolio entry, as well as a detailed description of how the learner had used the strategies taught in class to deal with reading the text. The data obtained from these

entries, in other words, concerned the use of reading strategies and their effectiveness. The results of the author's study showed that the experimental group students, highlighted in this paper, were able to transfer the learned strategies to their reading processes when reading English texts of their own accord. A total of 34 strategies out of 46 strategies which were explicitly taught in class during the 16 weeks of instruction were identified from their 30 submitted portfolio entries. These identified strategies included a wide repertoire of individual reading strategies and covered all five major types of strategies (ie bottom-up, top-down, metacognitive, social/affective and test-taking). This may indicate evidence for the participants' development in the use of reading strategies, which stems from the explicit strategy training provided to this group. This reading instruction focused on student learning repertoires of strategies and the co-ordinated use of multiple strategies while reading and monitoring comprehension. When considering the transfer of learned strategies among learners with different levels of reading proficiency, the result is a bit beyond the author's expectations as the participants with higher-level reading proficiency did not outperform their lower-level counterparts in all aspects of the acquisition of reading strategies. This contradicts the finding in previous research of Ikeda and Takeuchi [9] who found that students in their higher proficiency group were better at all six aspects of the process of learning reading strategies they measured than were those in the lower proficiency group. Although the portfolio entry as a research instrument was proved practical and convenient for analysis, some limitations were found. It gave only partial data, as not every single



sentence in reading material was reflected on. Moreover, the recorded accounts of certain students must be examined critically as the plagiarised version of classmates' portfolio entries can be found. In the author's study, some copy version assignments, which were randomly selected for analysis, were traced, but these items were left out and replaced with other students' assignments. Generally, this research instrument was satisfactory. The portfolio entries the author used revealed valuable data about the flexibility and variability of reading strategy use, which could cross-validate the data obtained from other instruments, namely the questionnaires and tests.

Pedagogical implications can be made. First, in reading strategy instruction, portfolio entries like the one in the author's study can be used as an out-of-class assignment for students to practise strategy use. Second, actual examples of effective strategy use, such as those found in the portfolio entries of the good learners in this study should be shown to and modelled for learners with low reading proficiency. Ikeda and Takeuchi [9] suggested that students receive this kind of feedback in different phases of instruction. Feedback based on the nine aspects and criteria for considering the process of strategy learning set forth in this study (ie 1 describing strategy use, 2 understanding of the purpose and merit of each strategy, 3 understanding of the conditions in which each strategy is used effectively, 4 understanding of how to use more than one strategy in combination, 5 knowing when to use each strategy effectively, 6 understanding of how to assess whether a strategy is effective, 6 knowing the manner in which strategies and their use to be described, 8 activating background knowledge and 9

reflecting on autobiographical responses) should be given explicitly in class and pointed out especially to the less-efficient learners. Third, as a research topic for future studies, portfolios as a data collection method for second or foreign language reading described in this article should be replicated and validated so that the method will be better developed to unveil more the truth about the strategy acquisition process.

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