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行動研究：線上閱讀策略探討

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摘要

本行動研究乃是以英文數位學習為出發點，探討合適大一英文基礎課程之線上閱讀學習平台。此計畫之目標著重在英文閱讀策略的訓練，學生可依其程度的不同而選擇相關的線上文章練習閱讀策略，以啟發學生學的興趣及提升其閱讀理解力。最終目的則是藉由有效的數位英文閱讀策略訓練，來提升學生英語文學習能力與興趣，使其成為主動的學習者。

本計畫共分為三個階段，第一階段為培養研究者對線上學習的專業知識，以便建構適用於大一學生的線上英文閱讀課程學習平台；第二階段則要求學生參與使用所建構的線上英文閱讀學習平台；第三階段則採用質與量並重的方式來進行研究資料的收集與分析，例如，利用問卷調查來了解與比較選課前、後學生對閱讀策略的運用，並利用焦點團體訪談、學生及研究者的省思日誌等來深入探究與評量學生的線上英文閱讀成效。

本研究發現，線上閱讀策略之訓練對於英文能力原本就較低學生的學習成效有極顯著的幫助，同時參與本次行動研究之大一非英語系學生對於使用線上語言工具，特別是字典，使用頻率明顯較高；整體而言，學生對閱讀線上英語文章的經驗呈現正面的態度與評價。此外，由於研究者須依據學生的需要來隨時調整設計線上英文閱讀策略之訓練，因此研究者也從本計畫的行動、觀察及省思等過程中，增長了本身利用數位平台進行英文教學活動的專業知識。

關鍵詞：線上閱讀策略、大一英文課程

Abstract

This action research project aimed not only to increase the researcher's professional knowledge related to online English learning but also to explore, investigate, and integrate web-facilitated English learning platforms into the Freshman English curriculum for EFL learners in a private university in northern Taiwan. A major focus of the current research was on pre-, during-, and after-reading strategy training to scaffold text comprehension in the online reading process.

The research project was divided into three phases. The first phase was the professional development period that fostered the researcher's knowledge construction, awareness, and hands-on experience through taking part in professional e-learning workshops, lectures, and conferences. General guidelines for reading strategies as well as essential e-learning components and online reading resources were compiled according to the needs of the student population. The research objective of the second phase emphasized on selecting, structuring appropriate EFL students' online reading platforms into the reading curriculum, based on their topics of interest, reading level, and most importantly, application of effective reading strategies. Extensive and intensive data collection was rigorous and systematic in the final phase.

The findings indicated that participating freshmen of lowest English proficiency had significant gains in the reading comprehension test from reading strategy instruction. Heavy reliance on online reading tools was observed across low-intermediate EFL college readers in this study. In general, students held positive attitudes toward this online reading experience. Issues of online classroom management and professional development were discussed.

Keywords: online reading strategy, Freshman English class

I. Introduction

The ultimate purpose of reading is to comprehend. During my years of college teaching, I noticed that often students are able to read the English text aloud without too much difficulty in pronunciation. However, when asked about describing main points or major concepts mentioned in the text, students are hesitant, have less to say, or state fragmented ideas about the text they have just read. This clearly shows that the importance of reading strategy training should not be overlooked even for college EFL readers. In addition, Taiwanese students ranked 42nd worldwide in reading comprehension of the TOEIC Bridge Test in 2001 performed poorly. Hence, Taiwanese reading researchers have begun to seek ways to enhance students' reading abilities through effective reading strategy training and furthermore, explore versatile use of Internet to facilitate reading interests and level of comprehension (Sim, 2004; Lou & Yong, 2001; Dai & Leung, 2004).

With the rapid spread of information technology, online English texts have become major learning resources for language learners. The advancement of technology has also brought new breakthroughs into the modes of teaching. Learning is no longer constricted in time and space. Compared to conventional classroom settings, the online learning context seems to be rather interactive, motivating, individualized and promising with multimedia presentations and careful curriculum designs (Chang, 1995; Huang, 2002; Lin, 2001; Sun, 2003).

In recent decades, more and more online reading websites have been developed; however, students' use of online reading strategies and how to integrate and appropriately select reading text at students' instructional and independent reading level for strategy training will continue to be the trend for future EFL reading research (Anderson, 2003). Numerous research studies were done that confirm the effective use of strategy training in relation to reading abilities (Anderson, 1991;

Block, 1986; Brown, 1980; Sheorey & Mokhtari, 2001). However, limited research studies were done related to online reading strategy use with EFL college readers in Taiwan. The researcher was assigned to teach low-intermediate EFL Freshman class during the time of this research. Therefore, the purpose of the current study is further refined to focus on investigating how low-intermediate college freshmen response toward online reading from reading strategy training of the researcher's Freshman English class. This action research project is based on integrating useful online reading resources and by the means of web-facilitated reading instruction to "spice up" the classroom reading curriculum, students will be trained to become strategic and effective language learners. Design of the course content consists of systematic hands-on practice of effective reading strategy training such as activating prior knowledge, inferencing, outlining, cooperative learning, monitoring reading comprehension (Chamot, 1996).

Anderson (2003) conducted the first study targeted on examining the role of L2 online reading strategies. Among the 247 English language learners, 116 (47%) students were EFL learners in Costa Rica while the others were ESL learners in the United States. Among the investigation of an online reading strategy questionnaire, three categories were included for evaluation of strategy use: global reading strategies (a.k.a. top-down strategies, Sheorey & Mokhtari, 2001), problem solving strategies, and support strategies. Based on the results from Online Survey of Reading Strategies (OSORS), no differences existed in the use of global reading strategies and support reading strategies between those groups. However, EFL learners were reported to have higher use of problem solving strategies than that of the ESL learners. The observed differences of reading strategy use between EFL and ESL learners' strategy use were: reading at a slower pace to monitor understanding, adjusting reading speed, stopping from time to time to monitor comprehension, repeated reading, and getting

back on track after losing concentration. Anderson (2003) concludes that strategy training and online strategy use identified from the OSORS will facilitate online reading ability. Therefore, OSORS was used as a guideline for online reading strategy instruction. Different from past reading strategy studies that used single research tool-questionnaires, or interviews, or field observations, the current research used multiple research tools to gain a holistic perspective on students' use of online reading strategies.

II. Methodology

Fifty EFL learners were enrolled in the three-credit Freshman English class during the course of research. Students' majors varied from political science, to applied math to food and nutrition. The mean score of their college entrance exam was 11.29. Those students were ability-tracked as low-intermediate learners based on the college entrance exam of the entire freshman class. As part of the course requirements, online reading tasks were required for students enrolled in the researcher's Freshman English class.

Online reading strategy questionnaires, intermediate-level GEPT were administered during the phase one of the research to students before and after the research study. Online reading strategy questionnaires (Anderson, 2003) were adapted and sorted into pre-, during-, after-reading, problem solutions of online reading difficulties, students' background and experiences of online reading sections. The Cronbach's alpha for the questionnaire is .89. GEPT reading test consisting of 45 multiple-choice questions was used to assess reading comprehension.

During phase two, after considering reading level, students' topics of interests, accessibility to the public and tracking mechanism, the researcher and students decided to participate on the CANDLE (<http://elearning.eng.ntnu.edu.tw/CANDLE/>)

reading center. With the available reading tools and extensive reading resources provided by the CANDLE reading center, the researcher was able to design an online reading course, select a wide variety of topics relevant to the students' reading level and interests, and most importantly, to keep track of each students' reading records (Chen, 2004; Liou et al., 2003).

An online reading website was constructed, piloted during the third phase by the researcher to enhance students' awareness of global and local reading strategies based on the results concluded from the online reading strategy questionnaires, field notes, and informal student interviews during phase one. Six sample reading passages were selected from classroom reading assignments. Online audio files recorded by native English speakers of each reading passage were available during the reading process. Students were encouraged to regularly log in this website to help practice reading strategies. Additional online reading resources were listed under each unit after logging in to the reading units. Reading strategies such as anticipation guide, questioning, story map, semantic mapping, double-entry journals, and K/W/L (Ogle, 1992) were all included as part of online reading strategy practices. For the review section of the passage, important key words and concepts were annotated with English definitions, sample sentences, and Chinese translations. Detailed records of students' reading practices in each unit, such as amount of time logged in, strategies being practiced, were available for the researcher.

The researcher also kept regular reflective journal entries to not only investigate various available online reading platforms from the beginning of the study, but also to seek to understand and evaluate effectiveness and impact of web-facilitated reading instruction on low-intermediate college students by rereading classroom observations, online chat rooms and discussion areas and look for recurring themes. Field notes from classroom observations, online discussions, and semi-structure interviews with

students were also recorded and transcribed. In other words, qualitative and quantitative data was collected, organized, coded, and triangulated recursively to enhance the researcher's holistic understanding of students' awareness of their online reading strategy use.

III. Results

Thirty-five students completed both the pre- and post-GEPT because of students' mobility during the academic year. The average score for pretest is 28.9 while the posttest shows 29.8. However, no significant difference exists at the .05 level between pre- and post reading comprehension scores. For further analysis, participants were divided into high, intermediate, and low proficiency groups. Results from the paired t-test of the intermediate GEPT reading test indicated a significant gain for the low proficiency group ($t = -3.262$, $df = 9$, $p < .05$). The mean scores of the low proficiency group increased from 18.48 in the pretest to 25.74 in the posttest. They have made significant improvement, 7.26, in reading comprehension after the reading strategy instruction. Although no statistically significance revealed for high and intermediate proficiency freshmen, the relationship between the pre- and post-test scores shows that two were positively correlated, $r = .44$. In other words, participants with high pre-test scores tend to score high in the posttest as well.

To detect the use of online reading strategy use before and after the strategy instruction, an independent t-test was employed. Table 1 contains the list of significant differences of online reading strategy use before and after the reading strategy instruction. Low-intermediate students reported a significant increase of global reading strategies, such as, previewing, reading with a purpose, adjusting reading speed, skimming and outlining. It should be noted that use of reference materials and adjusting reading speed both receive above 4.0 average scores.

Triangulated data from interviews and field notes indicates that low-intermediate students tend to rely on the online dictionary to clarify their understanding of unknown words. Consistent across data, participating students always mention that one major cause of their reading difficulties is vocabulary words. P value of students' use of graphic organizers and test question explanations was at the .000 level. This may be a result of the majority of students' unfamiliarity of graphic organizers at the beginning of the study and attachment of reading questions explanations within an online reading context. As to the possible causes of low frequency (2.33) use of graphic organizers, practicality on the online reading context and time-consuming were mentioned. Reading explanations after taking online reading tests was considered to assist low-intermediate learners in clarifying meanings of unknown words and phrases. Other high (means score higher than 3.5 points) frequency use of online reading strategies included: repeated reading, skipping less important words, and stopping to think of personal comprehension of the content. Although there were no significant differences reported for scanning, translating word-by-word, printing out online reading materials, reviewing of online reading materials, evaluating reading strategy use, noticing typographical features and text organization, reports from other data indicated an increased awareness of online reading strategy after reading strategy instruction. As to the amount of time allocated for weekly online reading materials during the 12-week course of study, an average of 24.88 minutes for each student was recorded and calculated from the two assigned online reading websites.

Data collected from the interview transcripts, field notes, reflective journal entries and discussion areas are coded into strengths and weaknesses. Themes generated from strengths of the course consist of: (1) a wide diversity of reading topics does enhance reading motivations and participation in online reading tasks, (2) appropriate text selected is generally considered to be at the students' reading level, (3)

online reading tools, especially online dictionaries solve readers' immediate concerns of unknown words or phrases, and (4) practices and reviews of reading strategies online were useful in reading comprehension. Three major themes related to the weaknesses of online reading emerged: instability of the server, excessive time spent tracking students' progress as well as structuring online reading tasks, and heavy loading of online reading tasks. In general, participating low-intermediate EFL college readers held positive attitudes toward online reading experiences during the course of study. Few expressed frustrations with adjusting from paper-based reading habits to online reading tasks.

IV. Discussion and Implications

Findings of the current study indicate the essential role of reading strategy instruction within the context of language learning. First, like other EFL learners in other studies (Anderson, 2003; Song, 1998), students benefit from explicit reading strategy instruction through gradual-release-model explanation of reading strategy, modeling, guided and independent practices of reading strategy (Janzen, 2001). Teachers need to be constantly aware of not only teaching students what the strategies are but also *when* and *how* to use appropriate strategies according to the reading purposes and ultimately become strategic readers (Anderson, 1991; Baker & Brown, 1984; Block, 1986; Carrell et.al., 1989). Because less proficient English language learners tend to focus on local reading strategies within word-sentence level, they should be provided with abundant opportunities to practice global and problem-solving reading strategies such as previewing, outlining, activating background knowledge, graphic organizers, and reading speed. However, due to the challenges associated with feedback and tracking mechanisms, most available online reading websites mainly use multiple-choice reading comprehension questions and

cloze as the predominate post-reading activities. Although students reported the usefulness of graphic organizers for recalling key points and important text structures, most online reading tasks often do not require practice of this sort. Hence, future research may consider ways to effectively design, and integrate effective web-facilitated writing-to-learn reading strategies in a collaborative online learning context such as K/W/L and dialogue journals.

Second, the researcher was not struck by students' preference for accessing online dictionaries to enhance reading comprehension. However, students need to be reminded of the purpose of reading and consider the use of other effective reading strategies such as using context clues, making predictions, skipping or scanning. Over-reliance on word-by-word translation will eventually undermine the joy of reading.

Third, the issue of effective online classroom management should be taken into serious consideration when integrating web-facilitated reading instruction. This action research of designing online reading tasks and instruction was far more time-consuming and challenging than the researcher had initially anticipated in terms of technological difficulties during the implementation stage. Regularly reviewing and commenting on large amounts of writing online as well as keeping track of those students' online reading records and discussions was burdensome, in addition to face-to-face classroom reading preparation. In addition, the sudden loss of data due to electrical shortage and sever damages done by computer hackers also added tremendous stress on the researcher and students. Hence, it is very important to ensure that professional and experienced computer experts are involved. In order to alleviate the heavy loading of reading and writing work for the teacher, students may be divided into groups to comment on others' writing and summarize common problems in the discussion area. Last but not least, continuous professional growth is necessary

for higher quality of teaching. Taking part in ongoing online e-learning courses, workshops and conferences have been most beneficial for the researcher during the course of this research because it not only expands the knowledge repertoire on implementing online course design, but also discovers innovative teaching ideas, and seeks out emotional support and advice from other college teaching experts.

V. Self-assessment

Major research procedures were carried out in a satisfactory manner as they were stated in the original proposal. Strategy training, extensive online reading, and guided online reading tasks did motivate students' language learning interest and enhance reading comprehension. Students also show an increased awareness of reading strategy use. However, due to the time constraints of this study, only limited changes were made based on students' comments during the final phase. Research findings of the current study will be presented to a future international conference.

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Table 1 Significant difference of the post-pre online reading strategy use

Online reading strategy	Pretest mean	Posttest mean	T-test
Reading with a purpose	2.79	3.46	t = 2.58, df = 74, p = .012*
Preview	2.73	3.61	t = 2.89, df = 73, p = .005**
Activate prior knowledge	2.95	3.67	t = 2.76, df = 74, p = .007**
Skim	2.63	3.3	t = 2.45, df = 74, p = .017*
Match of content and reading purpose	2.56	3.42	t = 3.24, df = 74, p = .002**
Adjust reading speed	3.19	4.03	t = 3.01, df = 74, p = .004**
Think in both English and mother tongue	2.95	3.58	t = 2.27, df = 74, p = .026*
Use graphic organizers	1.53	2.33	t = 4.11, df = 74, p = .000***
Outline	2.12	2.91	t = 2.90, df = 74, p = .005**
Reference materials (e.g. online dictionary)	3.58	4.30	t = 2.71, df = 74, p = .008**
paraphrasing	2.35	3.00	t = 2.50, df = 74, p = .015*
Monitor understanding when come across new information	2.58	3.21	t = 2.56, df = 74, p = .013*
Read test question explanations to enhance understanding	2.09	2.58	t = 3.71, df = 74, p = .000***
Critically analyze and evaluate information	2.33	3.27	t = 2.41, df = 74, p = .019*
Self-questioning	1.77	2.44	t = 2.75, df = 73, p = .008**

Note. * = p < .05

** = p < .01

*** = p < .001