



Collaborative Action Research for Reading Strategy Instruction: A Case in Taiwan

Ming-Yueh Shen
(myshen@nfu.edu.tw)

National Formosa University, Taiwan R.O.C.

Yueh-Kuey Huang
(ykhuang@mail.tku.edu.tw)

Tamkang University, Taiwan R.O.C.

Abstract

EFL learners' low engagement in reading class and poor reading proficiency has been a long-lasting and widespread problem challenging English teachers in Taiwan. This report of a collaborative action research project involving a teacher-researcher, a teaching assistant, and forty-six students, focused on how action research helps the teacher-researcher to seek solutions to the problem and on how the approach facilitates the learning of reading strategies by students. The general design of this study was based on the concepts of individual differences, the action research process – posing a question, planning, taking action, observing, and reflecting – as well as diagnostic teaching. Data were collected through a number of instruments: pre- and post-assessment of reading comprehension and strategies, classroom observation field notes written by the assistant, reflective learning journal entries, and semi-structured interviews. Data analysis involved three stages: organizing the data, coding the data, and analyzing and interpreting the data. Results reveal the learners' development in their use of reading strategies, better self-images, and more positive attitudes toward learning. This study suggests that collaborative action research can bring about change in the classroom by giving teachers a greater breadth and depth in understanding their own pedagogical practice and can lead to a more meaningful learning environment for learners. However, given certain limitations and difficulties in effecting change in teaching and learning, teachers and students should moderate any expectations of achieving rapid success.

1 Introduction

Low self-esteem and engagement in learning has been a long-lasting and widespread problem among students in Taiwan, particularly among those in technical universities¹. One of the challenges facing teachers is how to motivate students to become involved in the learning process. In an attempt to solve the problem in a traditional large-size class, the teacher-researcher decided to implement a methodological approach in class which would be more engaging and more effective in getting students to participate in their reading class. The course was designed in line with the teacher researcher's belief that students need to take a strategic approach to reading, should participate actively in class, and should keep themselves informed about what and how they are learning. This shift in her teaching attitudes and beliefs opens the door for a new approach to her

reading class: reading strategy instruction in a collaborative way.

Researchers of second/foreign language reading have long recognized the importance of reading strategies (Brantmeier, 2002; Carrell, 1985, 1989; Janzen, 1996; Slataci & Akyel, 2002; Song, 1998). They contend that strategy use is different in more and less proficient readers, who use the strategies in different ways (Carrell, 1989; Janzen, 1996). Moreover, it has been acknowledged that reading strategies can be taught and that reading strategy instruction can benefit all students (Carol, 2002; Carrell, 1989; Janzen, 1996). This body of literature on reading research provides the theoretical framework for this study.

However, although a vast number of the studies in reading strategy training have suggested a wide variety of reading strategies to be taught, few of them have been conducted with classes with a large size and students of diverse abilities. Classes in schools in Asian countries may have fifty or more students of different proficiency levels. There are some problems connected with working with students of different levels of ability in a large class. One of the problems is that the classroom teacher might design courses at the expense of particular groups of learners, e.g. the higher or lower achievers. It is also difficult to cover teaching materials at a rate that is appropriate to the more competent students without neglecting the less capable ones.

A growing body of research suggests that one way to improve teaching and learning in schools is to involve teachers in doing research in their own classrooms (Darling-Hammond & McLaughlin, 1995; Herndon, 1994; Lieberman, 1995). The regular classroom teacher as the provider of instruction helps to explore more thoroughly how reading strategies can be integrated into the regular reading class. The teacher-researcher can gain an emic ('insider') view of classrooms (Freeman, 1998) in addition to the etic ('outsider') perceptions that a researcher usually takes. Teachers, may, as Cohen (1998) proposes, assume the roles of diagnostician, learners, coaches, coordinators, language learners and researchers. The investigation into classroom teaching helps teachers to examine what they do as teacher-researchers, how the work is structured and how they carry it out on a daily basis, why something works or does not work for the learners, and how in large and small ways the work can be done differently or better (Freeman, 1998).

Diagnostic teaching represents one means of dealing with the problems described, arising from the practical teaching situation, by helping learners identify the strengths and weaknesses and thus facilitating their learning. Further to diagnostic teaching, Walker (2003) suggests that an effective teacher makes instructional decisions before, during, and after the reading event. In the role of a diagnostic teacher, the teacher researcher uses assessment and instruction at the same time to establish the instructional conditions that enhance learning. In doing so, the teacher needs to be sensitive to individual differences, ascertained through pre-teaching assessment, and to identify learners' problems, adjust the instruction, and monitor the improvement in both teaching and learning (Walker, 2003).

This article also presents the key concept of collaborative teaching because teaching itself can be very isolated and the teaching job has become increasingly demanding and complex with the teacher encountering problems such as physical constraints, the inability to devote sufficient individual attention to students' needs, and achieving learning effectiveness. Working with others can be a superb way to initiate, manage, and sustain one's teaching commitment because it encourages collaborative reflection, as Caro-Bruce (2000) suggests.

This article will describe an action research project for reading strategy instruction that was developed based on some of the principles of diagnostic teaching as well as collaborative teaching and learning. It also gives an account of how the teacher-researcher reflected on her teaching and modified her teaching methods based on her assistant's field notes, followed by a description of the changes in students' reading strategy use and their attitudes toward learning.

2 Collaborative action research for reading strategy instruction

2.1 The student participants

The participants were forty-six first-year students in the night program of a technical university

in Taiwan enrolled in the reading class in the second semester of academic year 2006. By technical university learners, I refer to those students in the Taiwanese technological and vocational education system, who are generally considered to be relatively inadequate in terms of vocabulary size, grammar knowledge, and strategy use (Joe, 1995; Lin, 1995; Ou, 1997). They have a relatively low learning motivation, and are less proficient and weaker in academic performance, when compared to the learners in general universities (Joe, 1995). The students in the night program are part-time students who generally have a lower self-esteem and poorer language proficiency, compared to those at the day program. Most of them entered university for the purpose of obtaining a diploma.

2.2 The teacher-researcher's experiences in the EFL reading class

During reading classes in the first semester, the teacher-researcher (also the class instructor) had been annoyed by the moans and groans of students when reading assignments were given. She was astonished to find that students laboriously looked up every difficult word in the dictionary and were unable to draw inference or to guess the meaning of unknown words. The teacher-researcher noted that her students were quite unprepared to deal with longer reading texts, without the ability to understand the main idea or knowledge of other reading strategies.

In response to the above-mentioned problems, the teacher-researcher was determined to change the situation in the second semester. The general design of this project is based on the key concept of collaborative action research, which involves working together with another teaching practitioner, her assistant. On the basis of the assistant's regular class observations, the teacher-researcher discussed, reflected, and made modifications to the course, with the aim of creating a more productive and pleasant reading class.

2.3 Instructional program

This section outlines how the teacher-researcher attempted to deal with her students with low-esteem and diverse proficiency levels in her reading class. This project was conducted in seven phases, as shown in Figure 1.

The goal was to provide a collaborative classroom environment in which teacher and students, as well as students and students, can work together and support each another, while remaining aware of their individual differences. The flow chart in Figure 1 presents and summarizes the reading strategy instruction program, adapted from Lin's (2003) action research process.

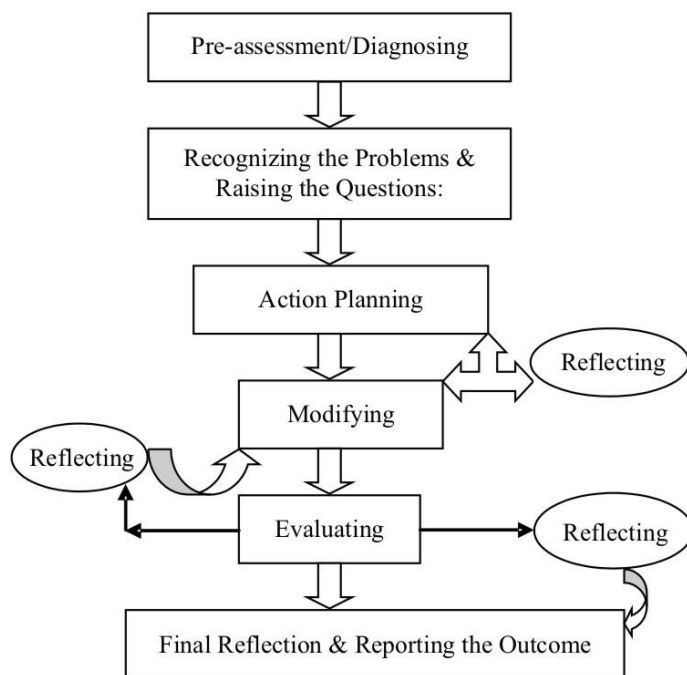


Fig. 1: Concept flowchart for collaborative action research project

- Pre-assessment/diagnosing*

The first phase of this research was diagnosis. Traditional strategy instruction emphasizes what strategies to teach, and how and when to use these strategies (Winograd & Hare, 1988). In the current study, an understanding of the learners' backgrounds and needs formed the prerequisite for the follow-up teaching. All the learners were required to write their first journal describing their learning backgrounds, beliefs towards reading and their learning difficulties. Moreover, a Diagnostic Reading Assessment² (Yang, 2004) was used to diagnose the students' abilities in reading skills and to identify their strengths and weaknesses in reading.
- Recognizing the problems & raising the questions*

The teacher-researcher and her assistant analyzed the students' pre-assessment and reflective learning journal entries. They discussed the data, identified the students' needs and learning difficulties, and then provided evidence of the critical components of student learning for each student. In class, the results of the pre-assessment (diagnostic test) were given to the students, and the teacher-researcher explained what each item meant. Using this individual assessment report (Appendix I), each student was made aware of his/her own weaknesses and strengths in the use of reading strategies. Accordingly, he/she became clearer about the learning goals he/she needs to pursue, i.e. which specific strategies he/she needs/doesn't need to pay more attention to. Another class data sheet (Appendix II) was used to trace learner's growth and provided valuable information for the teacher-researcher.
- Action planning – selecting strategies for instruction*

The lesson plans were carefully designed according to the results of the pre-assessment (i.e. the Diagnostic Reading Assessment and the pre-teaching journals) (Appendix III). They were developed through collaborative discussions between the teacher-researcher and her assistant. The teacher-researcher considered ways of solving the learners' problems and developed more learning opportunities for them.

- *Reflecting*
Using the teaching checklist (Appendix IV), results of quizzes, follow-up discussions with the observer (the assistant), and individual interviews with low achievers, the teacher self-evaluated the teaching process and the course arrangement by examining whether the outcome is positive and if the course meets the learners' needs. Constant reflection was conducted after Action Planning, during the process of evaluating and modifying. Additionally, the students were required to keep reflective learning journals at the beginning and at the end of the semester. By writing the learning journals, the students had opportunities to recall what strategies they had learned and how well they had learned them.
- *Modifying*
The instructional skills were modified and adjusted based on an analysis of the mid-assessment data (i.e. quizzes, observations) in order to maximize student learning. Based on the analysis, the teacher-researcher and researcher assistant also held discussions with each student in a teacher-student conference concerning the learning problems and possible ways to achieve more effective learning.
- *Evaluating*
The final phase was devoted to the description of the final assessment and the analysis of the data. An analysis of the on-going observations, reflective journal entries as well as responses in interviews and to a strategy questionnaire provided the basis of the results. The data analysis also included the analysis of the post-assessment using the Diagnostic Reading Assessment. The practice of collaborative teaching and learning challenged teachers in two ways. One of the challenges arises from the fact that expectations had to be different for different individuals within the class. In addition, the lesson content and the pace of delivery may have to be adjusted. The style of teaching may need adjustments as well. One way to look at assessment on an individual basis is to measure progress (Appendix II) rather than cumulative knowledge. A useful tool here was the use of the pre-assessment to help determine a starting point. Using the diagnostic pre-assessment (Appendix I) as a base, achievement was monitored and progress was traced. Another assessment tool was the students' self-assessment. When students are involved in the assessment process, they can come to see their own progress and themselves as competent learners.
- *Final reflection & reporting the outcome*
The teacher-researcher reflected on how the implementation of the action research affected students' learning and sought to investigate how the results could be generalized to similar populations. She made conclusions about the action research with regard to students' overall academic growth and reflected on how these conclusions would impact the planning and instruction for the following year.

3 Findings

3.1 Teacher's changes in instructional approach

In the following is a description of the action planning, reflections and modifications that took place in the course of the collaborative action research project for reading strategy instruction.

3.1.1 Recognizing the problems & action planning

After the diagnostic pre-assessment, the teacher-researcher discussed with her teaching assistant and decided what strategies should be emphasized. Taking into account the results of the pre-assessment (as shown in Table 1), they decided to pay more attention to such strategies as paraphrasing, solving vocabulary problems, connecting text to background knowledge, posing questions, syntactic analysis, internal consistency, and prepositional cohesiveness. These strategies were identified because the percentage of correct responses for these strategies was below 60 per-

cent of the total participants, indicating that students had weaknesses in the use of these strategies. Other important reading strategies, such as predicting, skimming for main idea, scanning, and summarizing were also introduced.

3.1.2 *Modifying*

The first observation note showed that the teacher-researcher was trying to avoid a grammar-translation approach by attempting to introduce the strategy of prediction in reading an article about the history of keeping time. However, she felt frustrated to find her students did not respond to the strategy of prediction as quickly as she had hoped. The students were unfamiliar with the class. They thus remained quiet and seldom gave a response.

Using the field notes and after a follow-up discussion with the teaching assistant, the teacher-researcher modified her teaching method. To facilitate the learning of the prediction strategy, she modeled the use of the prediction strategy with the help of a power-point presentation. She also chose an article about finding a 'Mr./Ms. Right' to stimulate students' learning motivation.

To develop the students' reading fluency, scanning was taught following the prediction strategy. The teacher-researcher modeled how one can quickly scan a text instead of reading every single word. Then, the students were asked to practice reading paragraphs in their textbook using this strategy. As the second observation note reveals,

The atmosphere of today's class is quite interactive because of the daily-life issue. The students were highly interested in this class.

However, the teacher-researcher was alarmed by the interviews with some less capable students who found it difficult to break their old habits based on a traditional reading approach, i.e. reading word-by-word and looking up every difficult word. They felt the scanning strategy was useful but were annoyed at having to find the main ideas within a paragraph. During the following class period, the teacher-researcher achieved some success by employing a "new" method. The teacher presented the main ideas within a paragraph using a guided approach. The use of multiple-choice and fill-in-the-blanks items made the task easier to understand.

Judging by the on-going quizzes before the midterm evaluation, the teacher-researcher was concerned that the test results would adversely affect the students' learning motivation. Believing that the feeling of success will propel students to learn further, the teacher-researcher asked her assistant to help them review what was covered, including vocabulary and the reading strategies. She also slowed down a little for the remainder of the semester and tried to reinforce the strategies already introduced through further activities and exercises. Subsequently, she introduced the comprehension monitoring strategy, which was apparently a difficult strategy for the students, as shown in Table 1.

To help students to think about their reading process, the teacher modeled the strategy of posing questions through a think-aloud process. After a guided practice, some students were invited to ask questions, while others answered them. The exchange between the teacher and the students, and between students and students, made the class more interactive. As the last observation note indicates,

... The atmosphere of the classroom interaction is warm and fun. The students were well-behaved and cooperative in the learning process.

3.2 Changes in learners' class performance

3.2.1 Overall improvement in reading strategy use

Table 1 indicates the students' overall performance for each reading strategy in the pre- and post-assessments. The percentage of correctness had been low for such strategies as paraphrasing, solving word problems, connecting text with prior knowledge, posing questions, and syntactic analysis, providing an indication that they had weaknesses in using these strategies to comprehend the reading passages. Through the emphasis given by the teacher-researcher and the assistant on these strategies, the students achieved progress in most of the identified categories, although the percentage increases were not tremendous. As shown in Table 1, the percentage of correctness increased from 54% to 58% for paraphrasing, from 51% to 58% for solving vocabulary problems, and from 51% to 60% for using prior knowledge. An increase was also established for posing questions and syntactic analysis, resulting probably from the emphasis on these two strategies after the pre-assessment. However, the analysis did not find progress in the use of the strategies of internal consistency and propositional cohesiveness. The students showed less progress for monitoring comprehension, compared with most other strategies.

I. Local strategies: dealing with basic linguistic units	Percentage of correctness – pre-assessment	Percentage of correctness – Post-assessment
Paraphrasing	54%	58%
Rereading	82%	80%
Solving the vocabulary problem	51%	58%
Recognizing text structure	73%	75%
Interpreting information	72%	72%
Connecting text with prior knowledge	51%	60%
II. Comprehension monitoring		
Monitoring comprehension	62%	64%
Posing questions	41%	49%
III. Discourse level		
Syntactic analysis	41%	50%
Internal consistency	58%	56%
Propositional cohesiveness	59%	58%
Structural cohesiveness (thematic compatibility)	73%	75%

Note: Percentage of correctness is defined as the proportion of correct answers to the total number of correct participants. The percentage of correctness is 54% for paraphrasing because 25 out of 46 students gave correct responses for the item for this strategy.

Table 1: Comparison of overall percentages of correctness for various types of reading strategies in the pre- and post-assessment

3.2.2 Less skilled learners' individual development in reading strategy use

To examine whether the diagnosis and collaborative teaching helped the less skilled learners in the class, this study looked at students' individual performances in the pre-assessment. They were defined as "less skilled" if they obtained a reading score below 50% (i.e. 10 correct out of 20 items) in the pre-assessment. Table 2 presents the six less proficient learners' scores for both pre- and post-assessment. Most of these students showed an improvement in reading comprehension, although the increase was slight. The results seem to indicate that the higher the proficiency of the

students was, the more amenable they were to the instruction. Those who performed better in the pre-assessment, i.e. students C, D, and E, also had higher scores in the post-assessment.

Students	A	B	C	D	E	F
Pre-assessment	5 (25%)	5 (25%)	6 (30%)	6 (30%)	7 (35%)	5 (25%)
Post-assessment	8 (40%)	6 (30%)	10 (50%)	8 (40%)	10 (50%)	6 (30%)

Note. The full score for reading comprehension is 20. The six students (A~F) were defined as less skilled based on their pre-assessment scores that were far below 50% correct.

Table 2: Six less-skilled learners' performance on reading comprehension

Further analysis of the reflective journal entries from the six less-skilled students indicates several positive responses. In spite of the slight progress made between the pre- and post-assessments, most of them reported development in identifying main ideas (recognizing text structures), guessing word meaning from context (solving word problems), and seeing the relationship between lines and beyond lines (internal consistency & propositional cohesiveness).

I appreciate for my teacher's instruction. She understands what we need to learn more. I became less panic than before. I know where the main point is and read faster. (Student A)

I learned how to find the main idea and what a paragraph is. I also learned a great deal of synonyms which help me to find the cohesive relationship among sentences. (Student C)

My teacher taught me to look into the relation between sentences. Thus, it helps me guess word meaning from the previous/or the following sentences. I can read more fluently and have more confidence than before. (Student D)

I learned to identify main idea, and supporting details. It's interesting to guess word meaning from its previous / following sentences. (Student E)

3.2.3 *Student's attitudes toward the instructional program*

Five students with the most progress (S1-S5, Group A) and five students with little or no progress in the post-assessment (S6-S10, Group B) were selected for in-depth individual interviews. The results are presented according to the sub-categories: (1) attitudes toward learning, and (2) attitudes toward the instructional program. While most of the responses were positive, a slight discrepancy between the two groups was found and described as follows. Overall, the students with better performance responded with more positive attitudes toward their learning. They were also keen to share their opinions about the instructional program, instead of responding with "no idea," or keeping silence, compared with their less-skilled counterparts.

(1) Attitudes toward learning:

When asked how they felt about the diagnostic approach in reading class, most of the students in Group B did not consider the repeated practice of unfamiliar strategies to be highly beneficial to them. They confessed to paying little attention to class even though they understood the teacher-researcher's dedication in helping them.

I didn't sense any difference to me. Well ... I just listened to class with less care about how much I understand. (S6)

My mind went completely blank in class. Well ... I don't know how to say ... I know my teacher was hard working, but I did not concentrate on learning. (S7)

I feel that my teacher tried in great effort to help us. But, I feel learners' learning attitude is the most important factor. (S9)

When asked what they had learned from the reading class, most of the students reported that they benefited from using reading strategies, such as rereading, scanning, inferring word meaning from context, skimming for the main idea, and the intra/inter-sentence coherence etc.

I learned to skim over the text to get a general idea. Then I read the questions and went back to scan the answers from the text. Before this class, I read word-by-word. My reading speed was very slow. (S1)

I found the transitional words very helpful to me. I learned to guess word meaning from the clues around the unknown word. I used to look up the words in the dictionary; but now I can read faster. (S2)

I think so. I used to look up every single word because I didn't know how to find main idea within paragraph. (S4)

What made me different from this course was that I feel less threatened by the unknown words after learning word-solving strategies. I learned to read the first and the last paragraph very carefully. (S6)

I greatly benefited from learning how to find main idea. I didn't have also helped me infer word meaning. (S3)

I used to read word-by-word; but I learned how to find main idea within paragraph now. That's great! (S8)

After learning reading strategies, I always located the general idea instead of grabbing my electronic dictionary as I did before. (S9)

However, S5 and S7 in the two different groups still found it difficult to change their old habits of reading. As S5 stated, "I read slightly in a way different from before; however, I sometime could not help returning to the dictionary for immediate help." Another student, S7, responded, "I felt I was not a hard-working student, paying little attention to what strategies were taught. I still read word-by-by word as I did before. No big difference to me."

(2) Attitudes toward the instructional program:

All five students in Group A realized that the teacher repeated several strategies in class for some less-skilled students and they did not de-value the repeated practice. Instead, they found it helpful to review what they learned several times.

I didn't feel loathsome with the repeated some strategies I already knew because I can use them better. (S1)

I usually reviewed the reading text before class. When the teacher repeated the strategies, I understood the use of strategies better and had a better understanding of what I read. (S2)

I've never learned strategies in my senior high school. Although some strategies are quite easy to use, I still enjoyed a lot. (S3)

While all the students in Group A provided suggestions for a better class in the future, the less capable students in Group B apparently had a comparatively lower self-esteem and contributed the failure to their poor attitudes to learning, without giving any suggestions.

I hope to read more about the current news and then I can apply the strategies to the real-life reading. (S2)

I feel we need to learn as many strategies as we can because they must be important for any language tests, i.e. GEPT and TOIEC. (S5)

I have no suggestions. I'm happy as long as the quizzes will not be difficult. I feel lazy in reading. (S6)

4 Discussion

This research project indicates how collaborative action research provides opportunities for teachers to work within a team. The teacher-researcher, the assistant, and the students can share their common problems in teaching/learning and then work cooperatively to solve the problems. Besides, the teacher-researcher can obtain support and help from other team members. In this study, the assistant regularly provided the teacher-researcher with class observations and field-notes, and discussed different approaches to improving teaching. As Burns (1999) contends, the advantages of collaborative perspectives on action research are broader than in individual action research. Reporting or sharing the results of the collaborative action project with peers and colleagues is an important part of the process and serves to strengthen the professional support system developed as a part of the project. Richards (2003) also suggests that taking action with careful plans makes essential changes to the researcher's teaching practice.

Strategy training for ESL/EFL readers is worthwhile; however, teachers, especially EFL teachers, should modify any expectations of achieving rapid success (Farrell (2001). As shown in the findings of this study, the teacher-researcher realized that she should not expect immediate success, after a process of trial and error. She also realized that reading strategy instruction takes time and that one semester is not enough to successfully change all of her students' old habits of reading and to improve their reading proficiency. In spite of the small amount of progress achieved, a promising change took place: most of the students became more aware of their reading process and of reading strategies.

Some characteristics of a meaningful collaborative instruction can be addressed as follows:

- Based on the diagnostic test results, the class teacher can identify an individual's profile of strengths and weaknesses. This profile will provide direction for remedial and compensatory strategies leading individuals with learning difficulties to academic success.
- Reflection serves as a meaningful complement to reading strategy instruction. Keeping observation notes and reflective learning journals provided the teacher-researcher and the students with a means for reflection on what happened during the learning processes. The regular observations and reflections captured the dynamics of the instructional procedures. As Cohen (1998) emphasizes, ongoing evaluation and revision of the training program is necessary to ensure a successful program. Students' reflective journals and the regular observation notes helped the teachers reflect on and modify the course design.
- Selecting interesting and relevant materials motivates learners to learn reading strategies. The observation notes reveal that the reading an interesting topic motivated the students to learn reading strategies. In this study, the topic of finding a 'Mr./Ms. Right' was quite relevant to the students' (young adults') experiences. Thus, with a higher level of interest in the reading texts, the students were apparently more involved in learning, when the 'skimming for main ideas' and 'scanning' strategies were introduced with that topic.
- The teacher serves in multiple roles of a guider, facilitator, and affective supporter. The results from the observation notes, the interviews and reflective journal entries confirmed the teacher-researcher's roles as a guider, facilitator, and affective supporter. There is no doubt that the effects of instruction may be subject to the individual's motivation to learn (Wenden, 1998) and the importance of the learners' motivation to learn in the EFL context cannot be overemphasized. However, the results of this study re-emphasize the teacher's roles in affecting changes in student learning. Knowing the difficulties attached to reading strategy instruction, the teacher-researcher in this study kept reminding her students of the relevance of the strategies for academic success. A teacher's commitment and encouragement can be the best motivational influence that inspires and supports the learning processes. As Dornyei (2001) writes, the teacher-researcher acts as programmer organizer, classroom manager, and affective supporter who exerts a direct and systematic motivational influence on students' learning.

5 Conclusion and implications

This article details a teacher-researcher's experience in working together with her assistant and her students in a reading class. The objective of this paper was to address the potential in developing and implementing modifications to teaching for low achievers in a reading class and illustrate how these changes can improve students' motivation to learn. The creation of a collaborative learning environment helped actualize the potential. Although being frustrated at the beginning of the semester, the teacher-researcher managed to modify and improve her teaching methods. Towards the end of the semester, she began to achieve some success in making her students more aware of their reading processes as well as the reading strategies taught.

Moving towards changes in teaching and learning is not an impossible task if we bring together the efforts of teachers and students in the classroom setting. Teachers should develop, implement, and demonstrate proficiency and enthusiasm to create a caring and encouraging learning climate in their classrooms.

Although the findings indicate both changes to the teacher's teaching and the students' learning resulted from collaborative action research, we should remain cautious about generalizing these results, as change may often be difficult due to the presence of factors such as the lack in skills for collaboration, the inability to share roles and goals between experts and learners, difficulties in classroom management, and motivation. Further research is needed to investigate the possible factors contributing to success or failure in collaborative action research.

Notes

¹ Technical University learners have a relatively low learning motivation, and are less proficient and weaker in their academic performance, when compared to those in the general universities, (Joe, 1995; Lin, 1995; Ou, 1997).

² Yang's Diagnostic Reading Assessment includes a six-level, multi-edition, reading comprehension tests and vocabulary tests, covering the content in the English courses from junior high to senior high schools in Taiwan. This tool measures (1) the learners' reading competence in various reading strategies (as shown in Appendix I) and (2) vocabulary size and knowledge. The reading comprehension test consists of 20 multiple-choice items.

References

- Brantmeier, C. (2002). Second language reading strategy research at the secondary and university levels: variations, disparities, and generalizability. *The Reading Matrix*, 2(3), 1–14.
- Bruce, C. (2000). *Action research facilitator's handbook*. (ERIC Document Reproduction Service No. ED472452)
- Burns, A. (1999). *Collaborative action research for English language teachers*. Cambridge: Cambridge University Press.
- Carrell, P.L. (1985). Facilitating ESL reading by teaching text structure. *TESOL Quarterly*, 23, 647–678.
- Carrell, P.L. (1989). Metacognitive awareness and second language reading. *Modern Language Journal*, 73, 120–133.
- Carol, R. (2002). Mindful reading: strategy training that facilitates transfer. *Journal of Adolescent & Adult Literacy*, Vol. 45(6), 498–513.
- Cohen, A.D. (1998). *Strategies and learning and using a second language*. New York: Longman.
- Darling-Hammond, L., & McLaughlin, M. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 76, 597–604.
- Dornyei, Z. (2001). *Teaching and researching motivation*. London: Longman.
- Farrell, T.S.C. (2001). Teaching reading strategies: "It takes time!" *Reading in a Foreign Language*, 13(2), 631–646.
- Freeman, D. (1998). *Doing teacher research*. New York: Heinle & Heinle.
- Herndon, K. (1994, April). *Facilitating teachers' professional growth through action research*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, USA.
- Janzen, J. (1996). Teaching strategic reading. *TESOL Journal*, 6(1), 6–9.

- Joe, S.G. (1995). *An Investigation of EST students reading comprehension of scientific text*. Taipei, Taiwan: Crane.
- Lieberman, A. (1995). Practices that support teacher development. *Phi Delta Kappan*, 76, 591–596.
- Lin, M.S. (1995). Designing an effective English program in universities of technology in Taiwan. In *Selected Papers from the 9th Conference on English Teaching and Learning in the Republic of China* (pp. 409–425). Taipei, Taiwan: Crane.
- Lin, S-C. (2003). Using collaborative action research to improve classroom discipline. *Journal of Taiwan Normal University: Education*, 48(1), 91–112
- Ou, H.C. (1997). A study of technological institute freshmen's reading comprehension competence. In *The 12th Technological and Vocational Education Conference of Republic of China: General Vocational Education and Humanities* (pp. 351–360). Taichung, Taiwan: Crane.
- Song, M-J. (1998). Teaching reading strategies in an ongoing EFL university reading classroom. *Asian Journal of English Language Teaching*, 8, 41–54.
- Slataci, R., & Akyel, A. (2002). Possible effects of strategy instruction on L1 and L2 reading. *Reading in a Foreign Language*, 14(1), 1–16.
- Walker, B. (2003). *Diagnostic teaching of reading: Techniques for instruction and assessment* (4th ed.). N.Y.: Prentice-Hall.
- Winograd, P., & Hare, V.C. (1988). Direct instruction of reading comprehension strategies: the nature of teacher explanation. In C.E. Weinstein, E.T. Goetz & P.A. Alexander (Eds.), *Learning and Study Strategies: Issues in Assessment Instruction and Evaluation* (pp. 121–139). San Diego: Academic Press.
- Wenden, A.L. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, 19(4), 515–537.
- Yang, Y-F. (2004). The pilot study of diagnostic reading assessment. In *The Proceedings of the 21st International Conference on English Teaching and Learning in R.O.C.* (pp. 241–254). Taichung: Chaoyang University of Technology.

Appendices

Appendix 1: Sample of individual assessment report

Name :		No :		Class :	
Reading Skills (Level 5)					
Types of Reading Strategies and the Item Distribution					
Strategies		Simple Description		Item Numbers	
Local Strategies: Dealing with the basic linguistic units					
Paraphrasing	The reader restates the content with different words.	Pre-assessment:	□4		
		Post-assessment:	□19		
Rereading	The reader rereads a part of the reading passage.	Pre-assessment:	□2, □4, □9, □10		
		Post-assessment:	□4, □8		
Solving the vocabulary problem	The reader tries to understand a particular word within the context, a synonym or some other cues in the content.	Pre-assessment:	□12, □18		
		Post-assessment:	□14, □17		
General Strategies: Dealing with high-level reading comprehension					
Recognizing text structure	The reader tries to find out the main ideas, the supporting points or the purposes of the text.	Pre-assessment:	□5		
		Post-assessment:	□10		
Integrating information	The reader integrates the old information printed in the passage with the new coming information.	Pre-assessment:	□13, □19		
		Post-assessment:	□3, □9		
Interpreting the text	The reader draws a possible inference, reasonable conclusion, or logical hypothesis about the content.	Pre-assessment:	□3, □7, □8		
		Post-assessment:	□3, □9, □20		
Utilizing	The reader (a) explains, extends, and clari-	Pre-assessment:	□15, □20,		

general knowledge and associations	fies content; (b) react to the text with his/her general knowledge and daily experiences.	Post-assessment: □14, □18
Types and Standards of Comprehension Monitoring and the Item Distribution		
Types	Simple Description	Item Numbers
Posing questions	The reader questions the correctness of the text.	Pre-assessment: □15, □16 Post-assessment: □2, □13
Monitoring comprehension	The reader evaluates or assesses his/her understanding of the content.	Pre-assessment: □1, □6, □11, □16, □17 Post-assessment: □1, □5, □6, □7, □11, □12,
Lexical standard	The reader checks whether the meaning of each word is understood.	Pre-assessment: □3, □9 Post-assessment: □5, □8
Syntactic standard	The reader evaluates the grammaticality of a sentence or phrase.	Pre-assessment: □7, □11□13 Post-assessment: □2, □13, □16
Internal consistency	The reader examines if the ideas expressed in the text are logically consistent with one another.	Pre-assessment: □13, □19 Post-assessment: □7, □15
Propositional cohesiveness	The reader checks the cohesive relationship among propositions sharing a local context.	Pre-assessment: □16, □17 Post-assessment: □1, □6
Informational completeness	The reader reviews whether the text provides all of the information necessary for full understanding.	Pre-assessment: □16 Post-assessment: □5
Structural cohesiveness	The reader examines the thematic compatibility of the ideas in a paragraph or text.	Pre-assessment: □1, □6, Post-assessment: □16, □17
<ul style="list-style-type: none"> • Teacher’s Comment: • Researcher Assistant’s Comment: 		

Appendix 2: Class data sheet (excerpt)

Student#	Pre-Assessment	Signif. Growth Target	Adjusted Growth Target	Final Ass.	Overall Growth	Meet Target (Yes/No)
#1						
#2						

(continues ...)

Appendix 3: Sample lesson plan

Lesson Plan 7

Date: Dec. 12th, 2005

1. Student number: 41
2. Subject: Reading
3. Course description: The main purpose of this course is to help students develop their ability in reading fluency, comprehension and vocabulary skills.
4. Course Text:
 - (1) ACTIVE: Skills for Reading, Book 3, Boston: Thomson, Heinle
 - (2) Supplementary handouts
5. Collaborators:
Regular English teacher: XXX
Research Assistant: XXX
6. Class procedures:

	Regular instruction	Remedial instruction
	Reading	
Topic	Chapter 7: Fashion and Style	
Reading skill	Skimming for the main ideas: (It's been taught last two weeks.)	Internal consistency: The reader examines if the ideas expressed in the text are logically consistent with one another. Syntactic standard: The reader evaluates the grammaticality of a sentence.
Reading activities	On page 74 of the textbook, students are asked to skim the passages quickly to find the main idea of each passage.	While doing the activities on page 76, the teacher asks students to check their partners' answers based on internal consistency and syntactic standard. While doing the activities on page 77, students are asked to circle the word to complete the sentences based on the skills of internal consistency.

Appendix 4: Sample teaching checklist (excerpt)

Strategies		Simple Description	Remark	
Have been taught?	Local Strategies: Dealing with the basic linguistic units		Students' Reaction:	
Not yet	Paraphrasing	The reader restates the content with different words.		
Yes	Rereading	The reader rereads a part of the reading passage.		
Yes	Solving the vocabulary problem	The reader tries to understand a particular word within the context, a synonym or some other cues in the content.		

(continues ...)