Metacognitive Learning Strategies in Reading: Their Effects on Writing Competence

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Empowering learners to become independent learners who can keep control over their own learning process is one important goal of education in this era of high technology. This implies of ways in which mentors of higher education can provide the kind of approach that presents a paradigm shift from a teacher-controlled to a student-controlled kind of learning environment. It should enable learners to become more autonomous who are capable of continuing their learning process even without the constant intervention or presence of the mentors. This implication also addresses to the significant role of teachers not just in knowledge transmission but likewise in helping them take increasing and serious responsibility for their own learning. While this concept has received undisputed support from most mentors yet it has rarely received the depth of consideration probably due to lack of updated knowledge on various learning strategies.

This article presents a way of empowering learners through the application of *metacognitive learning strategies*. One might ask why teachers be so concerned in developing learning strategies in their students' learning? One practical reason is that while learning autonomy may or may not be a desirable personal goal for an individual, it is, nevertheless, a vital requisite for someone to be able to function effectively in a modern society. In addition to drawing from a variety of resources to assist in putting learners' learning plan into action, it will be of help for these learners to be taught strategies to approach their learning especially in developing their reading and writing competencies.

This article also presents a study conducted on the application of metacognitive learning strategies (MCS) in developing learners' reading com-

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petence and their subsequent effects on writing skills. Furthermore, it aims to find out the relative contribution of reading-writing attitudes, reading interests and reading proficiency on their writing competence. More specifically, this study tries to answer the following questions:

1. Is there a difference in the pre-and post-performance between learners with MCS on the following:

   a. Reading Proficiency
   b. MCS Inventory
   c. Reading Attitude
   d. Writing Attitude
   e. Reading Interest
   f. Pre and post-across-time writing competence for high reading proficiency and low proficiency mean gain scores

2. What is the relative contribution of the methods of instruction-with or without MCS to the post-performance scores on

   a. Reading-writing Attitude
   b. Reading Proficiency
   c. Reading Interest
   d. Metacognitive Strategies Inventory

3. What is the relative contribution of the following gains on the post-writing competence of the learners?

   a. Reading Proficiency
   b. MCS Attitude
   c. Writing Attitude
   d. Reading Interest

4. Is there a difference in the learner's reading proficiency levels prior to and after instruction?

This study is significant as it hopes to contribute the following to language teaching and learning:

a. **Language Learning**. ESL teachers can help students recognize the importance of consciously using language learning strategies to make learning quicker, easier, more effective and with more fun.

b. **Writing Instruction**. The findings aim to provide insights to Filipino teachers of English about the way they can help learners cope with highly demanding academic tasks in science and technology particularly in reading and writing of texts associated with their fields of specialization. This will also provide the learners with the knowledge on how best they can take active part in their own learning. Content teachers will also find this study valuable for employing metacognitive strategies commonly used by their students to facilitate teaching in the content classrooms.

d. **Reading-Writing Attitude and Interest Assessment**. This study provides ways of undertaking informed classroom assessment both done by the teacher and self-assessment by the students on reading-writing attitude and interest. This assessment serves as basis for both content and language mentors to make classroom decisions about reading and writing programs.

e. **Teachers' Training Program**. Insights drawn from this study will serve as important inputs for updating language teachers, both pre-service and in-service, about MCS as tools for facilitating learners' language competence.

f. **Business and Industry**. Employees and employers of business establishment will be made aware of MCS that they can employ to facilitate comprehending and composing tasks often associated with scientific and technical texts they encounter in the workplaces.

g. **Research Endeavors**. This study will serve as input for future studies to improve reading and writing programs.

The subjects utilized in this study were confined to first year Physical Therapy students. Two classes randomly chosen by the chairman of the Department of English were assigned to this study. Since the grouping into sections was heterogeneous, students in these two classes were presumed to be of comparable abilities who satisfied the admission requirements of the program.

Following the thrust of this study, one group of learners (experimental) was exposed to the metacognitive instructions in reading as outlined by O'Malley and Chamot (1990) while the other group (control) was subjected to the traditional method deprived of MCS instruction. For the former group,

the MCS were integrated repeatedly in the lessons for learners to gain mastery and practice in their use.

Background of the Study

Reading and writing are two basic skill so much in demand in today's fast-flourishing world of science and technology. Printed materials facilitated the proliferation of knowledge which, in turn, made possible remarkable economic and industrial progress. In order to keep abreast with the contribute to this progress, one needs to be well-informed about the latest development in science and technology. In anticipating this need, a learner should be equipped with competencies in comprehending scientific texts and materials. In addition, he should be able to write about what he has comprehended and to articulate his own reactions, impressions and opinions about the issue at hand. There is a need, therefore, for learners to be able to read and write effectively.

While there is a dire need to develop the reading and writing competencies of Filipino learners to keep them abreast with updates in science and technology, there has been an increasing number of these learners who are unable to comprehend reading materials and who find difficulty in putting across their understanding through writing. Several studies in the past have shown this dismal performance of many learners in school. This may explain why current knowledge in science and technology has remained partially tapped and human resources have so far been minimally harnessed in hastening the country's economic growth. Hence, there is a need for classroom instruction that would develop in the learners an awareness of, and control over, mental processes and dispositions for understanding as well as a motivated commitment to employ those processes and dispositions in all subject areas throughout their school years. (Paris, Lipson, and Wixson, 1983)

How can these learners be helped to make them eventually competitive in the world labor market and to prepare them to become catalysts for Philippine progress?

Teachers in school will certainly have a significant role in producing a more literate generation. Research here and abroad, which capitalized on cognitive theories, have paved the way for promising pedagogical approaches that will potentially develop the learners to become effective knowledge decoders and encoders. Several studies in this regard have been anchored on various learning strategies at the learners' disposal that make them aware of ways they can best approach their learning. The same studies affirmed that learners can be developed intellectually if they have learned to use a repertoire of strategies to accomplish a learning task.

One significant mission of every educator is to help instill in the learner

the right attitude that learning is a lifetime task requiring a self-directed process. Thus, learners should be provided with skills that will empower them to adapt and respond to changing demands and make them continue learning independently even after they have left formal schooling. In the area of language teaching, much attention should be given to make learners aware that they will have to go on learning the language autonomously in order to independently manage and take control over the learning process.

Educational planners and researchers have now turned their attention to the role of learners in the language learning process. This is the result of the paradigm shift from a subject-centered to a learner-centered approach underscoring the important role of the learners not just as passive receivers of knowledge but as active participants in the learning process. They are now looking more closely at learners' strategies in an attempt to find explanations on how successful learners meet their academic demands.

Considering the urgent need to develop the comprehending and composing skills of science and technology students and drawing from the implications of the past studies, this study hopes to explore the extent to which development of metacognitive strategies will help learners cope with the demands of their academic pursuits. Local studies along this concern, such as the work of Foronda (1990), focused on discovering the metacognitive strategies employed by teachers and learners. Studies that dealt with the teaching of these strategies in reading and in finding out their effects on the learners' writing competence have not been explored so far. While studies abroad inferred potential effects of metacognitive strategies instruction on the reading competence of the learners, their subsequent effects on writing skills have yet to be studied. This will be the focus in this present study. In addition, since studies in the past have not so far included investigations on the effects of metacognitive strategies on reading-writing attitude and interest, these will be explored in this study.

Thus, this study hopes to broaden this topic of interest in order to draw more significant insights on the ways to empower learners with metacognitive strategies thereby making them more competent to tackle the demands of their academic courses and, hopefully, their future professional pursuits.

The Conceptual Framework of the Study

The rationale of this study lies in the crucial problem of the Filipino learners' lack of competence in both reading and writing - basic skills needed for success in their academic pursuits as well as in the preparation for their future jobs in the workplace.

In Fig. 1 is shown the conceptual framework paradigm of this study. It shows the relationships among the dependent and independent variables as

the focus of this study. The independent variable, the metacognitive strategies, was given to the experimental group to find out their effects on the following: reading interest, reading comprehension, reading-writing attitude, and metacognitive strategies inventory. These variables were investigated to find out their effects on the writing competence of the learners. Also given attention in this study was the possible direct effect of the methods of instruction to the writing competence of the learners.

The related literature/studies reviewed in this study consistently posit that metacognitive strategies play an important role in reading which involve both the conscious awareness and the control of one's learning. The study of Chamot and O'Malley (1994), for example, affirmed that through explicit instruction, students can learn to use learning strategies and that their use contribute greatly to an improved performance in language learning tasks. As soon as learners take control of and begin to regulate their own learning using the strategic approach to learning tasks, they start becoming autonomous and are able to apply these strategies across content areas. Thus, they no longer rely so much on their mentors for guidance, but instead become independent learners who can continue learning on their own.

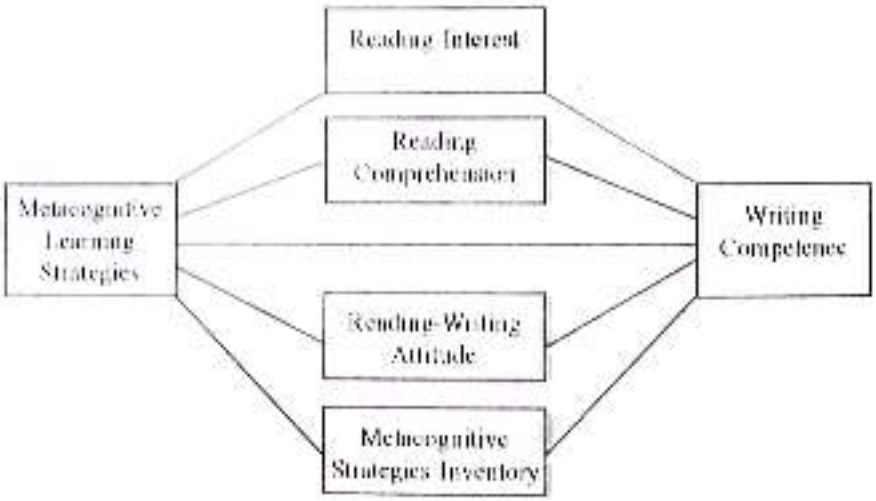

Figure 1. Conceptual Framework

Subsequent research on this topic of interest likewise confirmed the finding that learners' use of some learning strategies have made their comprehending tasks easier and quicker (Breena, 1995, Campbell, 1984, Collins, 1994). Craig and Yore (1992) indicated in their study that good readers' metacognitive strategies repertoire was generally higher than poor readers and that these strategies need to be taught and modelled to the learners for maximum benefits.

One dependent variable in this research's framework is the learners' reading interest which was seen to be affected by the employment of metacognitive strategies in reading. The extent to which learners are able to

cultivate reading interests after they shall have been taught some useful strategies is expected to raise their consciousness to read as regularly as possible. Finding out what materials interest students will help reading mentors choose what reading materials to use. Gere (1988) observed that learners tend to pursue those areas that are of interest to them and bring them some measure of satisfaction. Hence, if learners are motivated to read their texts and other materials in their content courses as a result of employing metacognitive starategies, then it is expected that they, too, will perform better academically.

Furthermore, a learner who has learned to employ metacognitive strategies in approaching a comprehension task will likewise be motivated to read more and will develop a positive attitude toward reading. He will then desire to read more about those things that interest him as observed by Karlin (1984), although Carlsen (1980) found that reading interests can span a number of years among individual learners. This study explored the effects of metacognitive strategies on the learners' reading and writing attitude and indirectly on the writing competence of the learners.

Lastly, this study underscores that expanded metacognitive learning strategies inventory will have relative contributions to the learner's competence in writing. Findings drawn from past studies (Wenden, 1987; Wong-Fillmore, 1976; Hosenfeld, 1977) highlighted the importance of discovering the stragetegies employed by learners in dealing with their learning tasks and in expanding subsequently their repertoire of metacognitive strategies. In a way, learners are developed to regulate and take control of their own learning pursuits.

Research Paradigm and Sampling Procedure

Two sections of English 1 (Freshman English) were employed as subjects in this study. These two sections were assigned to the researcher by the Chairman of the English Department prior to the observation period. Of these two sections, one was selected at random to serve as the experimental group to be exposed to the MCS and referred to as Group A. The other group, Group B, was introduced to the traditional approach and thus, was deprived of MCS instruction. Both groups were handled by the researcher herself to avoid teacher factors that might result when different teachers handle the courses.

Freshman college students were preferred since it is only during the freshman year that students are required to take the basic English course, English 1.

The Research Paradigm for this study is show in Fig. 2. As indicated, at the beginning of the semester, the Gates MacGinitie Reading Comprehension

Test (GMRCT) was administered to the subjects concerned. In addition, they were also made to write a one-page composition. The results of the GMRCT made possible the classification of students into high reading proficiency (HRP) and low reading proficiency (LRP) groups, respectively. The classification was based on the median score wherein those who got 44 and above were grouped under HRP while those whose scores ranged from 43 and below, under LRP. Thus, each class was composed of an unequal number of HRP and LRP students. The composition written by the learners determined the initial writing competence of the subjects which was rated by three (3) teacher raters based on the criteria adapted from O'Malley and Chamot (1994).

Both groups were subjected to MCS instruction for Group A and the traditional method for Group B for a span of one semester using the sets of materials prepared. Learners were then made to write compositions periodically as data for this study. At the beginning and at the end of the semester, the same evaluations were given purposely to compare the pre and post instruction performance of the learners. These evaluation instruments included the reading-writing attitude, reading interest, and metacognitive learning strategies inventory.

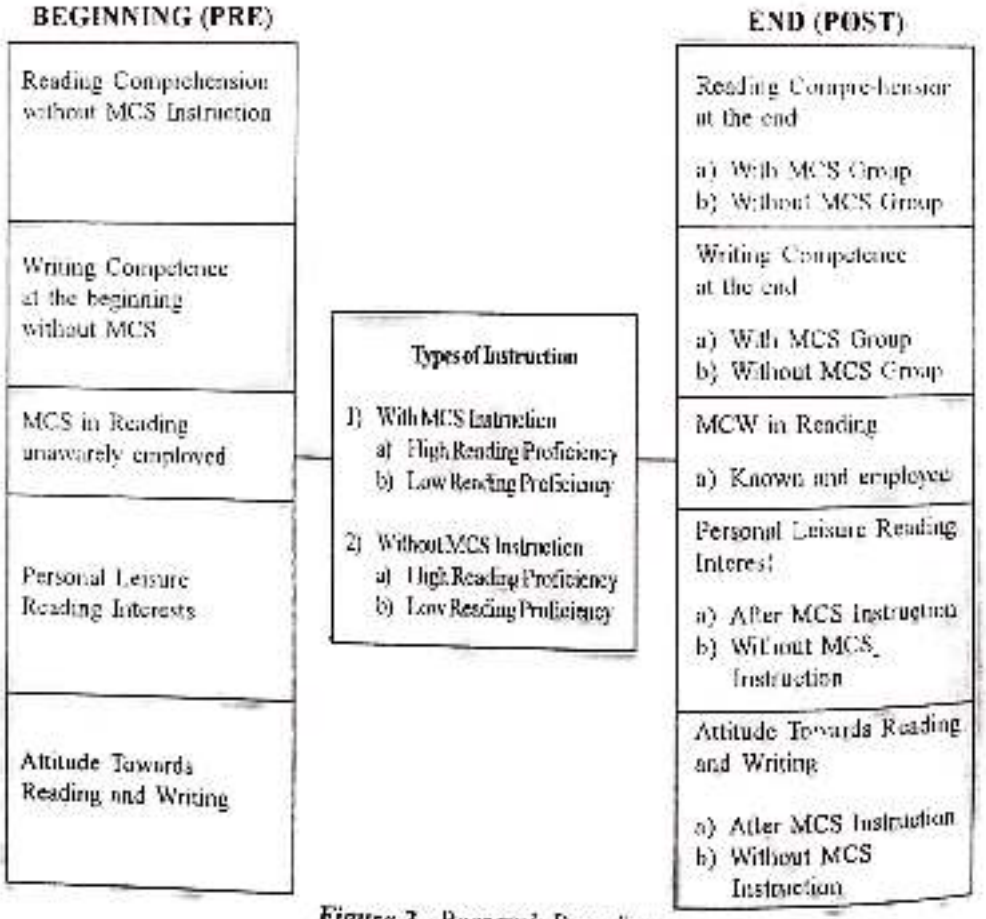

Figure 2. Research Paradigm

Conclusion

The following conclusions are made based on the findings of this study:

1. The reading comprehension skills of students in both groups, whether given instruction or not in metacognitive strategies or the traditional method, is significantly better than their reading comprehension skills prior to instruction. A noticeable improvement was manifested by the MCS-instructed group compared to the non-MCS instructed group.

   This implies that learners who have learned to use metacognitive strategies in approaching their reading tasks will more likely have an easier way of comprehending a reading passage.

2. The learners in both MCS-instructed and non-MCS-instructed groups indicated they used some metacognitive strategies in the part although those were unawarely employed. The MCS-instructed group has shown significantly higher MCS inventory at the beginning and at the end of the observation period compared to the non-MCS-instructed group. This shows that the group given the MCS instruction benefited more by learning faster and have become more aware of the application of metacognitive strategies than those not given instruction.

3. The group given metacognitive strategies instruction and those without, both improved in terms of reading attitude. Those given instruction in MCS showed less improvement in their reading attitude after a semester than those who were not subjected to MCS instruction.

4. A slightly greater improvement in writing attitude was manifested by the MCS-instructed group compared with the group without MCS instruction, although both groups improved significantly.

5. The learners in the MCS-instructed group revealed better reading interest than those without metacognitive strategies instruction.

6. The learner's writing performance after instruction indicated higher mean scores in the three compositions in the MCS-instructed group than those of the none-instructed group.

7. The post-performance scores are explained partly by the variables indicated, i.e., writing attitude, MCS inventory, reading comprehension and reading-writing interest and by other unexplained factors.

8. The effect of the methods of instruction on reading interest, reading comprehension, reading-writing attitude, metacognitive strategies inventory and writing competence are all positive. This implies that those who underwent MCS instruction were more benefited as indicated by obtaining more gains in reading interest, reading comprehension, reading writing attitude and metacognitive strategies than those who did not receive MCS instruction.

9. The metacognitive strategies instruction contributed to the improved reading proficiency of the low reading proficiency learners of which 55% were promoted to the high reading proficiency level at the end of the observation period. Thus, learners who underwent formal instruction in metacognitive strategies improved in their reading comprehension skills at the end of the semester.

10. The metacognitive strategies employed by learners before and after the intervention period increased among the MCS-instructed group. In each strategy, the MCS-instructed group has greatly improved as shown in the percentage increase.

    The non-MCS instructed group manifested improved percentage in their metacognitve strategies inventory after the intervention period but their increases were very minimal compared to the instructed group.

    The MCS-instructed group exhibited more use of MCS strategies after a semester's instruction than the non-instructed group. This strongly implies that the explicit instruction of metacognitive strategies has contributed greatly to the increased MCS inventory of the learners which they can aptly employ across content areas.

11. The post-MCS scores are dependent upon the method of instruction and pre-MCS inventory which explains 18% of the total variations of the post MCS scores.

12. Those who underwent MCS instruction were more benefited as indicated by obtaining more gains in reading interest, reading com-

prehension, reading-writing attitude, and metacognitive strategies inventory than those who did not receive MCS instruction. Higher gains were obtained in terms of MCS inventory followed by gains in reading comprehension, and thirdly, by gains in reading interest scores while the least improved by methods of instruction is reading-writing attitude.

13. The most important among the indirect effects is the one mediated by reading-writing attitude. With metacognitive strategies inventory and reading comprehension as intermediate factors, the methods of instruction had a positive effect on writing competence. However, reading interest appears not to have positively contributed to the level of writing proficiency as indicated by the negative causal effect.

14. Since the unexplained portion of the variations in writing competence is very high, it should be expected that outside of the model, there may be other related factors aside from reading interest, reading comprehension, reading-writing attitude and metacognitive strategies inventory. Among the possible factors are intelligence, socioeconomic status and sex.

15. Learners who underwent formal instruction in MCS appreciably improved in their reading comprehension skills at the end of the intervention period. Learners who have developed and learned to apply MCS in comprehension exhibited better decoding skills.

16. The learners in both groups have employed few MCS although they have not been aware of them at the start.

A comparison of the MCS inventory employed by learners before and after the intervention period indicates a noteworthy increase on the MCS-instructed group. In each strategy, the MCS group has greatly improved as shown in the percentage increase. The non-MCS instructed group manifested improved percentage after the intervention period but the increase was minimal compared to the MCS instructed group. It is evident that the MCS instructed group exhibited more use of MCS strategies after a semester's instruction than the non-instruction group.

Thus, it can be said that explicit instruction of MCS has contributed greatly to the increased MCS repertoire of the learners.

Implications

The following implications can be drawn from the given conclusions:

1. Integrating the teaching of metacognitive strategies in reading lessons will have favorable effects on the development of the learners' writing competence.

2. There is a need for explicit teaching of metacognitive strategies for learners to successfully plan, monitor, and evaluate their own learning process. This study takes the view that metacognitive strategies employed by successful learners can be taught to and learned even by less successful students.

3. Learners will best learn to use metacognitive strategies in the academic tasks if these are integrated regularly in their language lessons. In addition, this study takes the stand that new strategies need to be taught repeatedly to offer learners more classroom opportunities to learn and apply them.

4. Learners who have developed the use of metacognitive strategies and who have used them regularly in their academic tasks both in their language classes and other content areas, will eventually develop a positive attitude and an increased interest toward reading and writing.

5. Metacognitive strategies learned by learners in their language classes can be employed in their content classes, thus, enabling them to cope with the demands of both the language and the content information.

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