Explicit Instruction of Pure Text Structure: Arming Maturing Readers for Expository Science Texts

Reynaldo J. Ilumin

College of Education, Nueva Ecija University of Science and Technology, Cabanatuan City, Nueva Ecija, Philippines
reynaldoilumin4[at]gmail.com

Abstract: *This study was conducted to find out if explicit instruction of pure text structure improves comprehension of science expository texts among maturing readers. All reading selections used were written having the pure text pattern and arranged into thematic units. Seventy maturing readers were selected and matched through a silent comprehension test. Maturing readers were classified according to three levels of reading comprehension: advanced maturing, middle maturing, and beginning maturing. The seventy participants were equally divided and matched into two groups (the control group and the experimental group) which were as follows: 11 advanced maturing, 17 middle maturing, and 7 beginning maturing. Each group had a total of 35 member participants. The control group received the conventional instruction while the experimental group received the explicit instruction. The experimental group which received the explicit instruction outperformed the control group which in turn received the conventional instruction.*

Keywords: pure text pattern, maturing readers, explicit instruction, expository texts, conventional instruction

1. Introduction

A tailored – based reading program specific in addressing the difficulties and needs of maturing readers provides scaffolding to such group of readers in transiting from being a text decoder (mechanical reading) to text comprehender (meaning processing) and eventually lead them to become independent readers. Specific comprehension skills component for such group of readers should be identified in their reading program to complement the emerging needed skills as they are being immersed in the different types of expository texts.

Maturing readers are still in their beginning stage of exposure in meeting longer written discourse of expository science texts. Furthermore, they are also in their initial acquisition of comprehension skills. Thus, this makes them helpless as they experience difficulties in reconstructing and reorganizing the ideas of expository science texts. Most of all, their lack of schema on text structure explains primarily their handicap in reading comprehension.

It is in this premise that explicit instruction on text structure of expository science texts is a very timely and highly needed component of reading program for maturing readers. Explicit instruction on text structure awakens and builds strong schema on text structure which will facilitate in developing their comprehension skills in the content areas such as expository science text. Making maturing readers intentionally recognize text structure of expository texts is equipping them with complementing reading comprehension skills that lead them to be a comprehender of different reading texts.

Since the onset of maturing reader's developmental stage is very crucial, explicit instruction of text structure begins with the introduction of pure text structure of expository science texts.

Green (2005) points that in the initial transition of maturing readers greater emphasis is given on content learning areas.

Maturing readers are compelled to face squarely the different types of pure text structures of expository materials for them to learn in the different content areas. They then need to recognize and learn comprehension strategies for expository materials.

Just and Carpenters (cited by Alvermann and Phelps, 1995) explain that knowledge both on *content* and *structure* are needed in comprehension process. Therefore, there is a need for them to learn the different forms of *expository structure*.

There are factors contributing to the difficulties of maturing readers in the different content areas:

First, Richeck, Caldwell, Jennings, Larner (1996) have noted that *most informational materials are above the frustration level of the pupils with reading difficulties*.

Second, May (1998) has seen that *specialized vocabularies in these content areas* is another factor.

Third, Vacca, Vacca, Gove, Burkey, Lenhart, and McKeon (2003) have identified that *density and complexity of concepts in content areas* present a big problem for such group of learners.

Fourth, Armbruster (cited by May, 1998) also adds that professional writers often use unfriendly, inconsistent, and adulterated text structure. With these factors, many learners show disinterest in reading expository texts and exhibit low or poor performance when they read in content areas.
These reasons highlight the gap between maturing readers and the text materials to be used should be investigated as well as how such handicaps should be addressed are important concerns for maturing readers for them to progress in the reading process. Content Area teachers, using reading as a means for learning new things, are instrumental in helping pupils recognize the significance of schema on text structure and translating such knowledge for better comprehension both among pupils with or without any reading difficulties.

There is really a need for organizing instructional strategies in developing comprehension of text organization intended for maturing readers in the different content areas. It calls for systematic and scientific investigation in order to establish workable procedures in which the ultimate end is to provide scaffolding for maturing readers.

2. Methodology

This study adopted the experimental research design to prove if there was significant improvement of comprehension before and after the explicit instruction on pure text structure of expository science texts among maturing readers of a private elementary school.

Specifically, two groups (the Control and the Experimental Groups) were formed. Pretest – Posttest Experimental Design was used in this study.

The experimental group was composed of maturing readers who were subjected to explicit instruction of the expository science texts while the control group was composed of maturing readers who received the conventional instruction of teaching expository science texts.

Both the Experimental Group and the Control Group were subjected to pre and post assessments. The Experimental Group received lessons on the structure of expository science texts through explicit instruction. The control group received the conventional instruction in learning the lessons.

Purposive sampling method was used primarily for specific groups, the maturing readers, who were the needed participants in this study. Green (2005) identified that maturing readers were seen in the pendulum of latter part of Grade 4 to Grade 6 and sometimes even at the beginning part of Grade 7.

An informal assessment from the Informal Reading Inventory (IRI) was used to provide baseline information of the participants also known as benchmarking. The aim was to select the participants belonging to the target group – the *maturing readers*. In addition, through the assessment, the participants' **reading ability levels of instruction** (independent, instructional, or frustration) and their **maturing reading levels** (advanced maturing, middle maturing, and beginning maturing) were identified in the assessment.

After the benchmarking, with an interval of three days, then the pre – test was administered. The pure text pattern had six types of text structures: listing, sequential, description, cause and effect, comparison and contrast, and problem – solution. Two reading selections each for the pure text pattern were used. Each type of text in the pure text pattern had a total of ten – item questions of which the seven questions were on *literal level* and the three were on *inferential level*.

There were three samples of reading selections prepared for each part of pure text pattern. Graphic organizers were used to show intentionally the target type of expository text structure.

The reading selections were on science intended for maturing readers. It is in a single paragraph organized into study or thematic units.

The teaching of reading strategies in building the skill and metacognitive strategies include explicit use of appropriate graphic organizers such as **text frames**, **graphic organizers, thinking maps, semantic maps**, **charts,** and many more to highlight and create extra awareness or sensitivity to the dominant text organizational structure or pattern used by the author. Such awareness was then capitalized to process meaning construction.

The last was the Post test. The reading materials used in the Pretest were readministered for the control and experimental groups. The Pretest materials were completely adopted for the Post test.

The reading selections for the Pretest, Post test, Explicit Instruction and Conventional Instruction were taken from local and foreign books, trade books, and other learning materials. Priority was given to text books, trade books, and other reading materials (supplementary, reading kits) prepared by Filipino writers and widely used by private and public elementary schools. The bases for choice of the reading selections were the results of the consultations made from the science teachers: first, from the recommendations of science teachers from private and public schools; second, from their recommended textbooks; third, from the listed topics from teachers' curriculum guide, list of competencies, and DepEd's recommended science curriculum.

Furthermore, the reading selections were taken from chosen reading materials based on the following criteria: first, it is written intended for the intermediate level; second, it is written by experts in the field of science; third, it has gained wide and lasting acceptability by consumers; fourth, content is accurate; and, fifth, language and organization is at par with other materials.

Comprehension questions for each subtype of Pure Text Pattern and Mixed Text Pattern were tailored – made focusing on two levels: the literal level and the inferential level. Seven questions were on literal levels and three questions were on inferential levels. Such distribution was followed as recommended by Richek, Caldwell, Jennings, & Larner (1996) in tailoring informal tests for content areas like science. A total of 30 questions for pure text patterns were prepared while each subtype had ten (10) allotted questions.

The Explicit Instruction was divided into three segments which were patterned after the usual process in the skill building part of a developmental reading lesson. The process was applied to each subtype of the pure text patterns. They were as follows:

The *first segment* was the **stimulation,** which was an introduction of a particular text organizational pattern of an expository selection. The study or theme unit was introduced first to build schema of the participants. Some concepts were unlocked prior to the encounter of the reading texts. The deductive method was used for the participants to recognize

the target text pattern then they make the generalization. Minimal completion work was given through the aid of a graphic organizer, chart or map to aid them at recognizing the text pattern and for them to make the generalization successful. The process was done as a class.

The *second segment* was the **simulation** process where the class was given same type of organizational text pattern along with appropriate reading strategy such as text frame, map, chart, or graphic organizer to reinforce recognition of the target organizational text pattern.

The *third segment* was the **application**. In this stage, the class was given a new selection but with same organizational text pattern and they were asked individually to outline the ideas in the selection using appropriate graphic organizer, chart, map, or diagram.

Six (6) consecutive sessions were allotted for the study. The first 6 days were used for the pure text pattern.

3. Results and Discussion

The study was directed at describing the maturing and the reading ability levels of two groups of participants (the control and the experimental groups) **before** and **after** the implementation of the two instructions (the conventional and the explicit instructions) intended for each group respectively. The study further compared the performance of the two groups **before and after** the instructions.

Table 1 presents **control group's** level of comprehension of expository science texts using pure text patterns **before** giving the **conventional instruction**.

Table 1: Control group's maturing reading levels of comprehension before the conventional instruction

Maturing Reading Level	Number of Participants	Percentage
Advanced	0	0%
Middle	20	57%
Beginning	15	43%
Total	35	100%

The table shows that there is no advanced maturing reader in the control group. Twenty (57%) of the participants belong to the middle maturing reader while 15 (43%) are beginning maturing reader.

Table 2 displays the **experimental group's** level of comprehension of expository science texts using pure text patterns **before** to the implementation of the **explicit instruction.**

Table 2: Experimental group's maturing reading levels of comprehension before the explicit instruction

Maturing Reading Level	Number of Participants	Percentage
Advanced	0	0%
Middle	19	54%
Beginning	16	46%
Total	35	100%

The table above tells that there is no advanced maturing reader in the experimental group. A total of 19 (54%) of the

participants belong to the middle maturing reader while 16 (46%) are beginning maturing reader.

Table 3 displays **control group's** level of comprehension of expository science texts using pure text patterns **after** giving the **conventional instruction**.

Table 3: Control group's levels of comprehension of expository texts after the conventional instruction

Maturing Reading Level	Number of Participants	Percentage
Advanced	0	0%
Middle	21	60%
Beginning	14	40%
Total	35	100%

The table shows that from the control group no one moves to the advanced group while only one (1) advances from beginning maturing level to the middle maturing level. Results display that no significant changes happened after the conventional instruction on expository structure of science texts.

Table 4 exhibits **experimental group's** level of comprehension of expository science texts using pure text patterns **after** giving the **explicit instruction**.

Table 4: Experimental group's levels of comprehension of expository texts after the explicit instruction

Maturing Reading Level	Number of Participants	Percentage
Advanced	7	20%
Middle	24	69%
Beginning	4	11%
Total	35	100%

The table above displays that after the explicit instruction on text pattern of expository science texts seven (20%) elevated to be in advanced maturing level, 24 (69%) advance to the middle maturing level, while four (11%) remained at beginning maturing level. As a whole, a sum of 89% (20%, 69%) shows a significant improvement on the comprehension level of the maturing readers.

Table 5 displays **control group's** comparison of reading comprehension level on expository science text **before** and **after** giving the **conventional instruction** on pure text patterns.

Table 5: Control group's comparison of reading comprehension level before and after the conventional instruction

Maturing Reading level	Before Conventional Instruction		After Conventional Instruction	
Advanced	0	0%	0	0%
Middle	20	57%	21	60%
Beginning	15	43%	14	40%
Total	35	100%	35	100%

The table above shows that for the control group, none moves to the advanced reading comprehension level. Only one advances from beginning maturing reading level to middle maturing reading level of the group. This tells that the improvement on the reading comprehension level of the control group is very insignificant. Participants failed to

acquire and make use on their knowledge on text structure in extracting meaning from expository science texts.

Table 6 presents **experimental group's** comparison of reading comprehension level on expository science text **before** and **after** giving the **explicit instruction** on pure text patterns.

Table 6: Experimental group's comparison of reading comprehension level before and after the conventional instruction

Maturing Reading level	Before Explicit Instruction		After Explicit Instruction		Difference (After –Before)	
Advanced	0	0%	7	20%	7	20%
Middle	19	54%	24	69%	5	14%
Beginning	16	46%	4	11%	12	34%
Total	35	100%	35	100%	24	68%

The table shows improvement on the comprehension level of the experimental group: from zero (0) to seven (20%) of the participants accelerated to be in the advanced maturing reading level; an increase of five (14%) middle maturing from 19 (54%) to 24(69%) of the participants elevated to middle maturing reading level; and a decrease of 12 (34%)of the beginning maturing level in which from 16 (46%) down to four (11%) of the participants from the beginning maturing level. Significant improvement is seen from the beginning maturing level in which 12 (34%) of the participants accelerated, followed by advanced maturing level with 7(20%) improved participants, and lastly middle maturing with five (14%) accelerated participants. A total of 24 (68%) individuals registered a leap on the levels of reading comprehension of this particular group of readers.

4. Conclusion

Based from the findings of the study, the following were the conclusions made on the comprehension of expository science text of maturing readers of the control and experimental groups **before and after** the introduction of the conventional and explicit instructions:

1) The pre-test results of the pure text pattern for the control group further proved that the members of the group are the typical representative of maturing readers that almost identical with the experimental group.

2) The pre-test results of the pure text pattern for the experimental group also validated that the members of the group are the classic representative of maturing readers almost perfectly matched with the control group.

3) The post test results of the pure text pattern for the control group demonstrated insignificant improvement of the participants after the conventional instruction.

4) The post test results of the pure text pattern for the experimental group provided significant improvement among the participants after the explicit instruction.

5. Recommendations

The assessments on the materials, the challenges and demands of the instructions, the strict compliance on the procedure or process of the study, the selection, types, and responses of the participants prompted the following matters for recommendation:

1) One very evident problem among the participants, both for the control group and the experimental group, is their attitude towards reading. Majority of the participants have great dislike for reading long texts. It is recommended to explore further if such attitude on long selections can be changed after the instructions.

2) Laziness and impatience in meaning processing is very evident in verbal and nonverbal behaviors. They are impatient to track down how the different information and details are put together or organized. The instruction is getting immaterial and insignificant to them due to such negative behavior. It is suggested that studies focusing on probing this behavioral problem will greatly help future reading programs to help them address this problem.

3) Creating the pendulum from skill to strategy is not accomplished in just few sessions. It needs ample time because the process is habit forming. It is recommended that longer time for the study should be allotted to have a full view of the transfer relationship from skill to strategy.

4) Unhelpful habits already formed must first be unlearned among the learners. It is just like emptying their cups before you put something in it so that anything you put in it will not be wasted. Besides, it will speed up the acquisition and action of the skill – strategy transfer.

5) There must be a complementary partnership effort between the instruction provider (teacher) and the learner. More often, frustrations come frequently when learners do the activities only for compliance.

6) Responsible partnership must be mutually established prior to any instructions. The reason for this is to put awareness on the part of the learners their significance from the beginning till the end of the instructional procedure.

6. Acknowledgement

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Author Profile

Mr. Reynaldo J. Ilumin has been teaching for almost three decades. Most of his teaching years were spent in Higher Education Institutions (HEI). He was a former faculty member of Central Luzon State University, Science City of Munoz, and at the Graduate School of Core Gateway College Inc., San Jose City. Presently, he is teaching at Nueva Ecija University of Science and Technology (NEUST), Cabanatuan City. Aside from mentoring future teachers, he is also teaching at the Graduate School of NEUST.