The Framework Development for Interpretation Of Students Reading Literacy In Teaching And Learning Through Open Approach

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Abstract. The PISA 2000, PISA 2003 and PISA 2006 scores indicate that Thai students have read ability level 2 and 1. Students are able to read and read the text only when the text is readable. Can be referenced or compared or linked to what has been known at low levels. Assess and analyze at a basic level, linking the readings to the things that are related to their lives. No reference or comparison can be made if further analysis is required. This paper comprehensively Reading literacy includes the ability to extract the relevant information from texts and also to understand, use and reflect on written texts. The ability and incentive to engage with texts and address their content is also examined. In order to measure the diverse dimensions of reading literacy, in PISA it is defined as a complex competency with multiple facets. The exercises therefore include different situations and text formats. Solving reading exercises also calls for various cognitive processes of reading. A new feature of the 2018 PISA study is interactive exercises with several texts to be read in a simulated web environment. Aspects of reading literacy in the digital age are thus examined, including the ability to find, relate and assess information. This framework incorporates two approaches: 1) promoting students Reading Literacy instructions; and 2) Learning through Open Approach. The teaching about problem solving process which students can be improved the cognitive skill and develop several skills of students in the reasonal thinking, creative thinking, analyzed thinking, self-study and systematically problem solving ability. However, this framework emphasizes which grade 9 students in Demonstration School of Khonkaen University, Thailand.

1. Introduction
The goal of education has shifted its emphasis from the collection and memorization of information only, to the inclusion of a broader concept of knowledge “The meaning of knowing has shifted from being able to remember information, to being able to find and use it”[16]. The ability to access, understand and reflect on all kinds of information is essential if individuals are to be able to participate fully in our knowledge-based society. The PISA framework for assessing the reading literacy of students towards the end of compulsory education, therefore, must focus on reading literacy skills that include finding, selecting, interpreting and evaluating information from the full range of texts associated with situations that reach beyond the classroom.

According to Holloway [9] reading skills are essential to the academic achievement of middle- and high school students. Olson [15] claimed that in today’s society, reading literacy introduces a bias because it provides advantages to those who acquire the necessary skills. As the currency used in
schools, literacy provides access to literate institutions and has an impact on cognition, or thinking process [11]; it also shapes the way in which we think. Achievement in reading literacy is not only a foundation for achievement in other subject areas within the educational system, but also a prerequisite for successful participation in most areas of adult life [5].

PISA 2000, PISA 2003, and PISA 2006 were used for evaluation. The Thai students were able to read at level 2 or 1. Thai students could read and write the text. The reading is quite straightforward. Referenced or compared or linked to what has been taught at low levels. Assess and analyze at a basic level, linking the readings to the things that are related to their lives. No reference or comparison can be made. Further analysis is required.

The results reading skills from PISA 2000 to PISA 2006 of Thai children, the average score has dropped. The number of students being able to read below the basic level. Level 2 (increased from 37) %PISA 2000 (to 44.5) %PISA 2006 (and the proportion of students being able to read at Level 4 and Level 5 was reduced. This exposes the flaw of Thai education in reading skills, so it is essential to find a way to develop students in reading skills. Students are encouraged to read. Reading is an activity that requires perseverance. Motivation is another major factor that helps such activity to succeed. Because motivation is what motivates and influences the students and increase reading durability. Motivation is something that can make the student try to reach their goals as well.

The open-ended approach [1] or open approach [14] is a flexible, student-centered method which has recently gained popularity in the field of mathematics education. Here, students, working individually or in groups, are expected to apply their own unique methodology to solve given problems. These problems are so designed, that there may be more than one correct answer or there may be more than one way of arriving at an answer, thus they are able to challenge students at various levels of cognitive development. The problems used may be created from students’ experience or by modifying regular classroom questions. Questions may also be created to satisfy the expectations or demands of the teacher.

A good open questions is difficult enough to challenge high performing students, yet simple enough so that the slowest member of the class can find at least one solution [14]. The use of open questions in the teaching of mathematics is promoted as they stimulate critical thinking, unearth idiosyncrasies in students, have practical applications to student’s daily life.

As mentioned above, the researchers were interested in applying their solutions “The development framework for interpretation of students reading abilities and teaching and learning through open approach.” This framework incorporates two approaches: promoting students reading abilities instructions and learning through open approach. As noted above, the framework set forth in this paper consists of two approaches Reading Literacy and Open Approach: promoting reading instruction and learning strategies; and creating opportunities for engaging in reading instruction and learning strategies.

2. Literature review: The framework of Reading Literacy
Definitions of reading and reading literacy have changed over time in parallel with changes in society, economy, and culture. The concept of learning, and particularly the concept of lifelong learning, have expanded the perception of reading literacy. Literacy is no longer considered an ability acquired only in childhood during the early years of schooling. Instead it is viewed as an expanding set of knowledge, skills and strategies that individuals build on throughout life in various contexts, through interaction with their peers and the wider community. Cognitively-based theories of reading literacy emphasize the interactive nature of reading and the constructive nature of comprehension, in the print medium [6] and to an even greater extent in the electronic medium [4]. The reader generates meaning in response to text by using previous knowledge and a range of text and situational cues that are often socially and culturally derived. While constructing meaning, the reader uses various processes, skills, and strategies to foster, monitor, and maintain understanding. These processes and strategies are expected to vary with context and purpose as readers interact with multiple continuous and non-continuous texts both in print and (increasingly) when using digital technologies [4].
Reading literacy includes sufficient items in the 2000 or 2009 PISA assessments to report on each of the five aspects as a separate subscale, for reporting on reading literacy these five aspects were organized into three broad aspect categories: access and retrieve, integrate and interpret, reflect and evaluate.

Retrieving information tasks, which focus the reader on separate pieces of information within the text, are assigned to the access and retrieve scale.

Forming a broad understanding and developing an interpretation tasks focus the reader on relationships within a text. Tasks that focus on the whole text require readers to form a broad understanding; tasks that focus on relationships between parts of the text require developing an interpretation. The two are grouped together under integrate and interpret.

Tasks addressing the last two aspects, reflecting on the content of a text and reflecting on the form of a text, are grouped together into a single reflect and evaluate aspect category. Both require the reader to draw primarily on knowledge outside the text and relate it to what is being read. Reflecting on content tasks are concerned with the notional substance of a text; reflecting on form tasks are concerned with its structure or formal features. An elaboration of the three broad aspect categories is given below.

2.1 Access and retrieve

Accessing and retrieving involves going to the information space provided and navigating in that space to locate and retrieve one or more distinct pieces of information. Access and retrieve tasks can range from locating the details required by an employer from a job advertisement, to finding a telephone number with several prefix codes, to finding a particular fact to support or disprove a claim someone has made.

In daily life, readers often need to retrieve information. To do so, readers must scan, search for, locate and select relevant information from some information space (for example, a page of continuous text, a table or a list of information). The required information is most frequently found in a single location, though in some cases the information may be in two or more sentences, in several cells of a table or indifferent parts of a list.

In assessment tasks that call for retrieving information, students must match information given in the question with either identically worded or synonymous information in the text and use this to find the new information called for. In these tasks, retrieving information is based on the text itself and on explicit information included in it. Retrieving tasks require the student to find information based on requirements or features explicitly specified in questions. The student has to detect or identify one or more essential elements of a question, such as characters, place/time and setting, and then to search for a match that may be literal or synonymous.

Retrieving tasks can involve various degrees of ambiguity. For example, the student may be required to select explicit information, such as an indication of time or place in a text or table. A more difficult version of this same type of task might involve finding synonymous information. This sometimes involves categorization skills, or it may require discriminating between two similar pieces of information.

2.2 Integrate and interpret

Integrating and interpreting involves processing what is read to make internal sense of a text. Integrating focuses on demonstrating an understanding of the coherence of the text. It can range from recognizing local coherence between a couple of adjacent sentences, to understanding the relationship between several paragraphs, to recognizing connections across multiple texts. In each case, integrating involves connecting various pieces of information to make meaning, whether it be identifying similarities and differences, making comparisons of degree, or understanding cause and effect relationships.
In the fixed-text display space, information might be located in a single paragraph, across different paragraphs or sections of text, or across two or more texts. In the dynamic-text display space, integration can be more complex.

Interpreting refers to the process of making meaning from something that is not stated. It may involve recognizing a relationship that is not explicit or it may be required at a more local level to infer (to deduce from evidence and reasoning) the connotation of a phrase or a sentence. When interpreting, a reader is identifying the underlying assumptions or implications of part or all of the text. A wide variety of cognitive activities is included in this approach. For example, a task may involve inferring the connection between one part of the text and another, processing the text to form a summary of the main ideas, requiring an inference about the distinction between principal and subordinate elements, or finding a specific instance in the text of something earlier described in general terms.

Both interpreting and integrating are required to form a broad understanding. A reader must consider the text as a whole or in a broad perspective. Students may demonstrate initial understanding by identifying the main topic or message or by identifying the general purpose or use of the text. Examples include tasks that require the reader to select or create a title or assumption for the text, explain the order of simple instructions, or identify the main dimensions of a graph or a table. Others include tasks that require the student to describe the main character or setting of a story, to identify a theme of a literary text, or explain the purpose or use of a map or figure.

As mentioned above, interpreting signifies the process of making meaning from something that is not explicitly stated. In recognizing or identifying a relationship that is not explicit, an act of interpretation is required: thus interpretation is perhaps always involved somewhere in the process of integration as described above. The relationship between the processes of integration and interpretation may therefore be seen as intimate and interactive. Integrating involves first inferring a relationship within the text (a kind of interpretation), and then bringing pieces of information together, therefore allowing an interpretation to be made that forms a new integrated whole.

2.3 Reflect and evaluate
Reflecting on and evaluating the content of a text requires the reader to connect information in a text to knowledge from outside sources. Readers must also assess the claims made in the text against their own knowledge of the world. Often readers are asked to articulate and defend their own points of view. To do so, readers must be able to develop an understanding of what is said and intended in a text. They must then test that mental representation against what they know and believe on the basis of either prior information, or information found in other texts. Readers must call on supporting evidence from within the text and contrast it with other sources of information, using both general and specific knowledge as well as the ability to reason abstractly.

The outside knowledge to which textual information is to be connected may come from the student’s own knowledge or from ideas explicitly provided in the question. In the PISA context, any outside knowledge required is intended to be within the expected range of 15-year-olds’ experiences. For example, it is assumed that 15-year-olds are likely to be familiar with the experience of going to the movies, a context that is drawn upon in the items related to the stimulus Macondo, discussed below.

Reflecting on and evaluating the form of a text requires readers to stand apart from the text, to consider it objectively and to evaluate its quality and appropriateness. Implicit knowledge of text structure, the style typical of different kinds of texts and register play an important role in these tasks. These features, which form the basis of an author’s craft, figure strongly in understanding standards inherent in tasks of this nature. Evaluating how successful an author is in portraying some characteristic or persuading a reader depends not only on substantive knowledge but also on the ability to detect subtleties in language – for example, understanding when the choice of an adjective might influence interpretation.
3. Literature review: The Open Approach Theoretical

Teachers are student’s “guides” to academic achievement. Irrespective of geography, ethnicity or social status, the purpose of teaching remains the same: to produce intelligent, self-sufficient learners who are able to apply their knowledge to solve future problems and make valuable contribution to the society in which they live. Pedagogical methodology has been categorized as either teacher-centered or student-centered, with the latter deemed more appropriate for developing critical thinkers, self-sufficient learners, and problem solvers[8]. In the teacher-centered approach, the student is a passive learner who tries to “absorb” and “reproduce” the prescribed body of knowledge presented by the teacher. In contrast, student-centered pedagogy focuses on students being active participants in the teaching – learning process. The student is in control of the pace and, in some cases, the content of their learning. “Student-Centered or “Learner-Centered” education has its origins in constructivist developmental theory [8].

Constructivism refers to the idea that individuals “construct” their own understanding of the world as a product of their interactions with their environment. With respect to mathematics, rather than giving students a prescribed method of interpreting and calculating (as is seen in teacher-centered approaches), student are encouraged to apply their experience to solve routine and no routine problems in their own unique way. May be more than one correct answer or there may be more than one way of arriving at an answer, thus they are able to challenge students at various levels of cognitive development. The problems used may be created from student’s experience or by modifying regular classroom questions. Questions may also be created to satisfy the expectations or demands of the teacher.

Unlike in the usual teacher-centered approach, this method eliminates the use of patterns, heuristics and generalizations, in solving problems. Here, the teacher facilitates and guides discussion and summarizes the lesson by recapitulating the strengths and weaknesses of each presented method [1] suggested that students learn in different ways, and therefore, there is the need for a teaching method that will allow students to demonstrate their knowledge in a variety of ways. An open question is set so that students at various levels within the class can solve the problem based on his or her ability, experience and interpretation of the problem given.

3.1 The Open-Ended Approach Framework

In other words, the process of organizing activities or situations is open-ended, encouraging students to think in terms of three scenarios.

Situation A is about defining a situation that is a problem or the source of problem(s). The role of the teachers is to stimulate a situation that is a problem or the source of problem(s) and presenting the classes to stimulate a variety of solutions or foreseeing the situation. The role of the learner is to think of an answer or a solution. Or create another situation in response to the given situation which will motivate or influence an extensive learning. Situation B is a session of investigation to find solutions to their problems. Based on the encountered experience. The role of the teachers is to guide and spark a discussion about connection with other ideas. A variety of solutions can be acquired to integrate the responses that may be seen as unrelated which will generate new knowledges. Situation C is a new and more complicated situation than ever before. Students will try to create more common problems in response to given situation. Based on the activities of Situation B and from the solution of the problem. Students will be able to find more general responses.

3.2 The problems presented in the “open method” have the following characteristics

“Process is open” means the process that students use to solve problems. Students are free to use any ways of solving problems based on their current ability or knowledge. When the students enters a problem situation the teachers given. Students will be able to solve problems in a variety of different solutions. Some students may find the words to be divided into 5 categories, such as compound words, duplicated words, repeated words, Thai words, foreign languages words. Some students may find the criteria to be divided into seven words: compound words, repeated words, Thai words, foreign
languages words, one syllable words, two syllables words, three syllables words. Some students may find the words to be divided into 10 words: compound words, repeated words, Thai words, foreign words, slang words, independent words. Depending on the view and the student's interests or abilities, even if the circumstances in Examples A and B are the same. It can be seen in Example B that the situation is open. But students can have a variety of thinking processes. As in Example B, where the situation is a closed situation. Students have limited thinking processes. End products are open. When defining students, the problem must be a problem with many correct answers. One of the key aspects of open-source problem solving is the open-source approach to problem solving.

In other words, after the student has solved the problem. Students can develop their problem-solving process into new problems or solve new problems by changing the conditions or elements of the original problem [10].

Considering that in the “open-end” method proposed by Shimada focus on managing the classes that benefit from having many correct answers. But in the “Open Approach Method”, the meaning of openness is considered in a wider perspective than the open-ended method. The “open-ended approach” accepts that the problem is an open-ended problem, and that there is a wide range of answers here are many problems in the problem.

Inprasitha [10] has introduced “open approach” as a teaching method that focuses on problem solving. The teaching sequence is as follows.

1. Posing open-ended problem is an open-ended problem to students. The focus of the open problem is to make the problem a student's problem.
2. Students' self-learning is a way for students to learn in person while solving their problems. The aim is to make students learn from one's own learning to learn together with others.
3. Whole class discussion and comparison is the introduction of a variety of concepts for students to discuss the class to other students to have the opportunity to learn from the ideas of their fellow classmates.
4. Summarize by linking students’ concepts that occur in the classroom. The concept of mathematical ideas emerges in the classroom.

It is connected by the concept of students in the classroom. At the student's self-learning stage and discussion stage, the whole class can go back and forth, as in the case of student ideas, sometimes without waiting for ideas to emerge. Teachers can bring ideas to debate at the moment in these two steps there are overlapping parts and can be reversed.

As mentioned, this concludes that open learning management uses open-ended problems to motivate students to think through situations. The problem solving process of the 4-step students in Inprasitha [10] is as follows: 1) Presentation of open-ended problems 2) Self-study of students 3) Class discussion and comparison 4) Summary by linking the concept of students that was discussed in the classroom.

4. The framework of students Reading Literacy in Teaching and Learning through Open Approach
The researcher studied document, theory and research related to Reading Literacy and teaching style using “Open Approach” as a process that promotes reading literacy development. Therefore, the researcher is interested in introducing an “Open Approach” to develop reading literacy skills among students. The research framework is summarized as follows.
The Develop framework for interpretation of students Reading Literacy in Teaching and Learning through Open Approach

5. Conclusion

From the study we can conclude that “The Develop framework for interpretation of students Reading Literacy in Teaching and Learning through Open Approach” has gained the ability in aspects guided the development of the reading literacy assessment tasks:

Step 1: The Open-ended Problem Posing has gained the ability in aspects guided the development of the reading literacy assessment tasks Retrieving information tasks, which focus the reader on separate pieces of information within the text, are assigned to the access and retrieve scale. Because in this step, the instructor must present the problem situation as follows: Open process is the correct solution. There are several open-ended approaches. The answer is correct. The open development approach is a solution to problems that can be developed into new problems. With the pre-reading, Pre-Reading to introduce and stimulate interest in the topic. Encourage the learner to reason for reading. Prepare the language for the students before reading the story.

Step 2: The students’ self-studying has gained the ability in aspects guided the development of the reading literacy assessment tasks is integrate and interpret, forming a broad understanding and developing an interpretation tasks focus the reader on relationships within a text. Tasks that focus on the whole text require readers to form a broad understanding; tasks that focus on relationships between parts of the text require developing an interpretation. The students in the group will help each other to figure out how each one is done, then discuss the group in order to find a conclusion and the reason for this answer is because there is a way to finish it. Read the concept of the group together with the reading stage by making the reader understand the purpose of reading according to the structure of the writing or the body to read.

Step 3: The whole group discussion and Step 4: The conclusions by associating the students’ approach being occurred in class has gained the ability in aspects guided the development of the reading literacy assessment tasks reflect and evaluate the content of a text and reflecting on and evaluating the form of a text, are grouped together into a single reflect and evaluate aspect category. Both require the reader to draw primarily on knowledge outside the text and relate it to what is being read. Reflecting on and evaluating content tasks are concerned with the notional substance of a text;
reflecting on and evaluating form tasks are concerned with its structure or formal features. Because in step 3 and 4, when the students get the answers together with the reasons, ideas and methods, they will present the class page so that their friends will know about the students' thinking. Next With Post-Reading, students transfer their knowledge of the subject matter and read a story that links them to their knowledge, interests, or opinions. The final conclusion of the activity is that teachers and students learn together to find conclusions of similar and different lessons in finding answers to each group in order to conclude a common concept. Read Post-Reading to connect reading with knowledge.

The teaching about problem solving process which students can be improved the cognitive skill and develop several skills of students in the rational thinking, creative thinking, analyzed thinking, self-study and systematically problem solving ability. However, this framework emphasizes 9th grade students in Demonstration School of Khonkaen University, Thailand.

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