EXPLORING TEACHERS' ABILITY IN DEVELOPING PISA-LIKE READING TASKS

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Abstract: This study is a part of a joint study, aiming to develop a teacher professional development program on training teachers to teach PISA-like reading. The bigger program focuses on a pedagogical intervention that incorporates PISA reading into English and Indonesian subjects based on Systemic Functional Linguistics Genre-Based Approach (SFL GBA) and has been reported in Emilia *et al.* (2022). Meanwhile, this study centred around the observation of English teachers' ability to develop PISA-like reading tasks. The intervention is framed within PISA reading (OECD, 2019a,b), and SFL GBA (Halliday & Matthiesen, 2014; Derewianka & Jones, 2016; Emilia, 2011). The study employed a case study design. The findings show that teachers were able to develop PISA-like reading tasks, evidenced from the collected reading items that follow PISA 2018 cognitive processes and response format (OECD, 2019 a, b). Moreover, teachers' responses from interviews were likewise positive, indicating their increased awareness of PISA and their ability to design similar reading tasks. It is recommended that the training be conducted in a variety of settings with a larger number of teachers for them to eventually assist Indonesian students in improving their reading literacy as suggested by PISA.

Keywords: *PISA*; *PISA-like reading materials; reading; SFL-genre-based approaach.*

INTRODUCTION

PISA (Programme of International Students Assessment) is a triennial survey of 15-year-old students held by the Organisation for Economic Cooperation and Development (OECD) that assesses the extent to which the students have acquired fundamental knowledge and skills essential for full participation in social and economic life (OECD, 2019a). One of the domains assessed in PISA is reading literacy. In Indonesia, Indonesia Ministry of Education and Culture (2019) has given more attention to literacy since Indonesia is reported to be categorised as one of the low-performance quadrant score countries in PISA, especially in reading. OECD (2019a) reports that only 9% of Indonesian students were capable of comprehending lengthy texts, dealing with abstract or counterintuitive concepts, and establishing distinctions between fact and opinion.

Based on several studies, unsatisfactory order thinking questions in 2013-2018 English Indonesian performance in reading literacy was National Examination in Indonesia. It is also due to the unfamiliarity with various text types supported by a research conducted by Yasinta *et*

and formats (EF EPI, 2015; Zaim et al., 2021), and the inexperience of observing the form of PISA questions (Zaim et al., 2021). It is reported that the students were not familiar with some texts especially mixed texts (Zaim et al., 2021). Meanwhile, regarding the inexperience of observing the form of PISA questions, it is reported that the majority of students were used to multiple choice questions, but not to open-ended questions. Zaim et al. (2021) add that actually reading literacy assessment in Senior High School has acknowledged several forms of questions, excluding complex multiple choice. However, to Zaim et al. (2021) most teachers used multiplechoice questions and close-ended questions in assessment. Therefore, in their study, Zaim et al. (2021) suggest to use more diverse questions form in reading literacy. Furthermore, in a study reported by Putra and Abdullah (2019), it is reported that there is insufficient amount of higher order thinking questions in 2013-2018 English al. (2022) which reveals that students need to (OECD, 2019a). PISA classifies texts from improve their competence in reading literacy skills especially evaluating and reflecting texts questions type. Similarly, some studies revealed that EFL teachers face challenges in developing higher order thinking questions in reading literacy (Gozali et al., 2021; Singh et al., 2019; Tyas et al., 2019).

Developing students' reading literacy skills cannot be separated from teachers' ability to develop reading tasks. Studies show that teachers significantly impact students' achievement (Gess-Newsome et al., 2017; Ma et al., 2022; Myrberg et al, 2018; OECD 2017). Haw et al.'s (2021) study revealed that across a variety of educational and socioeconomic situations, the desire for supportive teachers significantly predicted student reading achievement. Specifically, in developing tasks, teachers need thorough reading а knowledge of texts and reading items to depict reading tasks in ways that might support students' learning and assess student work (Snow et al., 2005). In regard to this phenomenon, the increasing awareness towards the development of reading literacy skills has led more researchers to study reading literacy, especially PISA with taking teachers preparation aspect as the starter point in teacher professional development (TPD) program.

Limited studies are conducted in regard to TPD program which offers PISA-like reading task development (see Selvina et. al 2018; Khamkong, 2018). Whereas, a TPD program which equipped teachers to develop reading tasks is needed to make them eventually be able to assist students improving PISA reading literacy skills. Thus, this study attempts to explore how teachers develop their ability in designing PISA-like reading tasks in a TPD program. This paper focuses on investigating how teachers develop their ability on designing PISA-like reading tasks based on cognitive process.

PISA involves three factors that are considered to contribute to the reading literacy process; reader, text and task (OECD, 2019a). Reader factors include motivation, prior knowledge and cognitive ability (OECD, other 2019a). Nevertheless, this paper focuses on text factors and task factors which are closely related to the development of PISA-like reading tasks.

Text factors are defined as the range of texts available to the reader at a given place and time (OECD, 2019a). These factors include text format and type, the complexity of the language used, and the number of texts a reader encounters

several dimensions: source, organisation and navigation, format and type (OECD, 2019a). In the interest of space, this paper will focus on text format.

Based on the format, texts are classified into three; continuous, non-continuous, and mixed (OECD, 2019a). Continuous texts are texts which are formed by sentences that are organised into paragraphs. Non-continuous texts are composed of a number of lists or elements such as tables. graphs, diagrams, advertisements, schedules, catalogues, indexes, and forms. Mixed texts contain both continuous and non-continuous elements.

Task factors are defined as the goal that should be achieved by the readers (OECD, 2019a). Unlike traditional reading assessment which tend to answer discrete questions, in PISA the task is designed to achieve overarching purposes. Students' involvement with tasks can be increased using a scenario-based assessment technique, allowing for a more accurate assessment of what they can perform (OECD, 2019a). In PISA, students need to achieve the goal of reading based on several cognitive process categorised by OECD (2019a).

The 2018 Reading Literacy Framework categorises several cognitive processes that span a range of difficulties. Those cognitive processes include Locate Information, Understand, and Evaluate and Reflect as can be seen in Figure 1.



reading literacy framework adapted from OECD (2019a)

"Locate Information" cognitive processes require readers to perform two skills. First, it is to access and retrieve information within a text-it involves scanning a single text in order to retrieve target information consisting of a few words, phrases or numerical values. Second, it is to search for and select relevant text – searching for information among several texts to select the most relevant text given the demands of the item or task. how the author is expressing their purpose and/or point of view. These items often require the student to reflect on their own experience and knowledge to compare, contrast or hypothesise

"Understand" cognitive process requires three skills: (1) Representing literal information. Comprehending the literal meaning of sentences or short passages, typically matching a direct or close paraphrasing of information in the question with information in a passage. (2) Integrating and generating inferences. Going beyond the literal meaning of information in a text by integrating information across sentences or even an entire passage. Tasks that require the student to create a main idea or to produce a summary or a title for a passage are classified as "integrate and generate inference" items. (3) Integrating and generating inferences across multiple sources. Integrating pieces of information that are located within two or more texts.

In "Understand" cognitive process, students are required to read a text and use analytical skills to seek the truth in the text (Facione, 2015; Paul and Elder, 2019). It encourages students' skills in reflecting upon their thinking process to create clear, well-reasoned ideas for the benefit of themselves and others. It is aimed to focus on individuals' abilities in thinking, so students will learn how texts impact them (Paul and Elder, 2019). Similar to this, in the international reading literacy assessment, PIRLS, readers must also interpret and integrate the text in order to comprehend it. These abilities are necessary for students who want to combine their personal knowledge and experiences with the text's meaning in order to develop a more in-depth or comprehensive grasp of it (Mullis & Martin, 2019).

"Evaluate and Reflect" cognitive process requires three skills; (1) Assessing quality and credibility. Evaluating whether the information in a text is valid, current, accurate, unbiased, reliable, etc. Readers must identify and consider the source of information and consider the content and form of the text or in other words, how the author is presenting the information. In some cases, a thorough evaluation necessitates the reader identifying and assessing the information's source: whether the author is competent, wellinformed, and benevolent. In accordance with the assertions of a number of experts, filtering for relevance and reliability is a necessary skill while reading digital media (Barzillai, 2018; Britt et al., 2017; Mo, 2019). (2) Reflect on content and form. Evaluating the form of the writing to determine

point of view. These items often require the student to reflect on their own experience and knowledge to compare, contrast or hypothesise different perspectives or viewpoints (OECD, 2017). This skill is also needed to formulate perspective independent, well-grounded or opinion (Van de Oudeweetering & Voogt, 2017). (3) Detect and handle conflict. Determining whether multiple texts corroborate or contradict each other and when they conflict, deciding how to handle that conflict. For example, items classified as "detect and handle conflict" may ask students to identify whether two authors agree on the stance of an issue or to identify each author's stance. In other cases, these items may require students to consider the credibility of the sources and demonstrate that they accept the claims from the more reliable source over the claims from the less reliable source. In other cases, these items may require students to consider the credibility of the sources and demonstrate that they accept the claims from the more reliable source over the claims from the less reliable source. Readers must be aware of the conflict and develop strategies to resolve it when confronted with several pieces of text that contradict each other (Stromso, 2017).

Many nations around the world view the development of pupils' critical thinking abilities as a very essential educational objective (Stupplea et al., 2017, Larsson 2017). Therefore many studies encourage the importance of teaching critical reading and critical thinking skills by providing students with enough background information of reading texts and leading them to enough literal comprehension have texts (Khamkong, 2018). Likewise, in study, teachers are also encouraged to create evaluate and reflect cognitive processes questions which is expected to lead and make students perform those critical thinking skills as they read PISA reading items.

In addition, assessing quality and credibility is the skill that students must possess in order to be able to be critical thinkers. Being a critical thinker means to perform the ability to be reasonable by referring to reliable sources (Facione, 2015; Paul and Elder, 2019). Critical thinking is also depicted as the ability to consult reliable sources and get in the habit of reflecting on what is believed, read, and heard. In reading, accuracy can also be associated with the ability to identify main purposes and concepts in the texts (Paul and Elder, 2019).

In PISA, students are also required to distinguish facts and opinions. Distinguishing

facts and opinions becomes an important component in critical thinking (Paul and Elder, 2019). Critical thinkers construct reasonable arguments systematically that require evidence. It emphasises the reason one has in believing issues and its implications of the belief (Facione, 2015). Thus in this study teachers learn how to create questions that will encourage learners to perform critical thinking skills.

METHOD

This study is a part of a larger joint study, involving three universities in Indonesia. The larger study aims to investigate whether the training program can help 14 English and 10 Indonesian teachers enhance their capacity to teach PISA-like reading conducted by Emilia et al. (2022). The focus of this study is to explore teachers' ability in developing PISA-like reading tasks. This study employed a qualitative method and a case study design. Several scholars explain that a case study encompasses a thorough analysis of a case (Cohen et al., 2018; Hamied, 2017). The design suits the study because it allows me to explore the phenomenon through analysis and indepth investigation to understand a behavioural condition of how teachers develop PISA-like reading tasks.

The main project involved 24 teachers who voluntarily participated in the training, including 14 English teachers and 10 Indonesian teachers in West Java, Indonesia. Meanwhile, this study focused on 14 English teachers. The teachers are committed to join the training for six meetings, lasting for 8-hour every Saturday. In the interest of space, purposive participant selection was used to focus on the document analysis and interview of 3 teachers to ensure that the chosen participants can give enough data to support the study's objectives. The selected participants for document analysis is presented in Table 1.

Table 1. Selected participants for document analysis on PISA-like reading tasks developed by teachers

Number	Name	Current Teaching
	(Pseudonyms)	Commitment

1.	Bakri	Junior High School
2.	Nurma	Senior High School
3.	Padma	Junior High School

There were two data collection techniques employed in this study: analysis of teachers' work on PISA-like reading tasks and interview.

The samples of teachers' works on PISA-like reading tasks include texts selected by teachers and reading items or questions developed by teachers. This study focused on analysis of the questions or reading items produced by teachers based on their cognitive process, and response format of PISA 2018 (OECD, 2019b). Teachers submitted their works on Google Classroom for four times.

In the last meeting, an interview was administered to enable participants' responses in their own terms (Cohen, et.al, 2018). The interview was analysed using several steps proposed by Cohen *et al.* (2018). First, the data from the interview session were transcribed and coded. Second, the written data were categorised into themes that had become the focus of this study; teachers' ability to develop PISA-like reading tasks especially producing reading items. Then the data were presented in a condensed body of information.

RESULTS AND DISCUSSION

This section attempts to answer the research question *"How do teachers develop PISA-like reading tasks?."* This section discusses PISA-like reading tasks developed by teachers including the sample documents made by Bakri, Nurma and Padma. The discussion is supported by teachers' responses on their experiences in developing PISA-like reading tasks.

Teachers' ability in developing PISA-like reading tasks was observed from the cognitive process and response format of the reading items. In developing reading items, teachers were asked to create questions ranging from simple questions such as locating information and generating inferences to more complex questions such as reflecting and evaluating. Below is the distribution of cognitive process of each task designed by teachers.

 Table 2. Items distribution of PISA-like reading tasks developed by teachers

						0		1 7			
SET	Cognitive Processes							Response F	ormat		
	Locate Information		Understand		Evaluate & Reflect		Multiple Choice		Clos	Ope	
	Access	Search &	Represe	Integrate	Assess	Reflect	Detect	Simple	Complex	e	n
	&	Select	nt	&	quality &	on	&			Resp	Resp
	Retrieve	Relevant	Literal	generate	credibilit	content	handle			onse	onse
	Informat	Text	Meaning	inference	У	& form	conflic				
	ion			s			t				
	within a										

	text										
SET 1	9	0	7	21	3	21	2	17	11	21	14
SET 2	6	0	13	10	1	8	0	15	8	11	4
SET 3	8	2	4	15	0	9	0	14	6	12	6
SET 4	9	1	3	18	0	6	2	17	7	9	6
Subtotal	32	3	27	64	4	44	4	63	32	53	30
Total				178					178		
Items											

Table 2 portrays the item's distribution of PISA-like reading tasks designed by teachers which consist of cognitive process and response and reflecting. The following section discusses format. There were 178 questions made by the sample of teachers' work on PISA-like teachers. Generally, teachers were able to develop reading tasks created by Bakri, Nurma and PISA-like tasks. PISA provides a thorough Padma. cognitive process of each task. The cognitive process demonstrates the type of questions that PISA-like reading tasks developed by Bakri span a range of difficulties. The results show that The first PISA-like reading tasks made by Bakri teachers can create questions in a variety of can be seen in Figure 2.

difficulty levels starting from locating information, understanding, as well as evaluating





The figure 2 shows non-continuous text selected by Bakri. From the text, Bakri was able to develop PISA-like reading items or questions based on three cognitive processes as seen below.

Which lines can bring us from <u>Harbour</u> Front to <u>Serangon</u> ?					
Cognitive Process Locate information: access and retrieve information within a					
Response format	Closed constructed response				

Figure 3. Locate information: access and retrieve information within a text designed by Bakri

Figure 3 shows *locate information: access and* retrieve information within a text task developed by Bakri. This question is designed in a form of close constructed response. Bakri was also able to create understand cognitive process question as can be seen Figure 4.

If it takes 2 minutes to get to another station and at each station the train stops for half a minute, how long will it take to travel from <u>Harbour</u> Front to <u>Buona</u> Vista?

Cognitive Process	Understand: Integrate and generate inferences
Item format	Short response

Figure 4. Understand: integrate & generate inferences sample question designed by Bakri

As shown in Figure 4, the question made by Bakri is categorized as understand: integrate & generate inferences cognitive process. This question is designed in a form of close constructed response.

The result also shows the most complex cognitive processes: reflect and evaluate reading items created by Bakri as seen in Figure 5.

Some of the stations, such as <u>Outram</u> Park and <u>Dhoby</u> Ghaut have more than one color. What does having more than one color mean?						
Framework Cha Cognitive Process	racteristics Reflect and evaluate: reflect on and evaluate the form of a text					
Response format Open constructed response						

form sample question developed by Bakri

As depicted in Figure 5, the reading item developed by Bakri is categorised as evaluate & reflect: reflect on content & form.

Moreover, most teachers acknowledged that after the training, they were able to develop reading items based on cognitive processes, as suggested by OECD (2019a). It can be shown from Bakri's comment on his experiences to develop PISA-like reading tasks.

> Yes, that's the impact for me, I can make questions based on cognitive processes as suggested by PISA. The students are required to be able to show their abilities in various skills and it's our job to make questions that can assess the abilities of both high reference and low reference, all the cognitive process, locate information, understand and reflect and evaluate. -Bakri, Excerpt 1

Bakri's comment shows that he was able to make questions based on cognitive processes suggested by OECD (2019a).

PISA-like reading tasks developed by Nurma

Nurma also demonstrated her ability in developing PISA-like reading tasks by developing questions based on each cognitive process as can be shown below.



Figure 6. Non-continuous text used by Nurma (British Council, n.d)

Figure 6 shows a continuous text selected by Nurma. From the text, Nurma was able to develop PISA-like reading items or questions based on three cognitive processes as seen below. Nurma created cognitive processes Locate information:

Figure 5. Evaluate & reflect: reflect on content & Search for and select relevant text question as can be seen in the following figure.

What word in the area?	text which refers to an action of intentionally	damaging	public				
A. Tagger							
B. Graffiti							
C. Vandalism							
D. Swear words	3						
Framework characteristic							
Cognitive Process	Locate Information: Search for and select						
Ŭ	relevant text						
Response format	Multiple choice						

Figure 7. Locate information: Search for and select relevant text developed by Nurma

Figure 7 shows that Nurma was able to create locate Information: Search for and select relevant *text.* This question was made in multiple choice format.

Nurma also created "Understand" cognitive processes question as can be seen in Figure 8.

Which of the stude	nts consistently shows disagreement towards graffiti?						
A. Ninna							
B. Raija							
C. Melinda							
D. Alexandra							
Framework characteristic							
Cognitive Process	Understand: Integrate & generate inferences						
Response format	Multiple choice						
D . D	I la danadana da dana anada ana da ana ana						

Figure 8. Understand: integrate and generate inferences developed by Nurma

As seen in Figure 8, Nurma also created simple multiple choice question format. It is categorised as understand: Integrate and generate inferences

Nurma also demonstrated her ability to create Reflect and evaluate question as can be seen in figure 9.



conflict question developed by Nurma

Figure 9 shows the question made by Nurma which is categorised as Reflect and evaluate: detect and handle conflict question. The question was made in open constructed format. Another sample of evaluate and reflect cognitive processes question made by Nurma can be seen in Figure 10.

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Some statements are matters of opinion, based on the ideas and values of the

writers. Some statements are matters of fact, either correct or incorrect.	which may be tested objectively and
Draw a circle around "matter of opinion" or "matter from students' writing listed below.	er of fact", next to each of the quotation
Quotations from students' writing	Matter of opinion or matter of fact
"Graffiti is beautiful to see."	Matter of opinion / Matter of fact
"The job of a tagger can bring a lot of money."	Matter of opinion / Matter of fact
"Graffiti is only stupid words or senseless pictures."	Matter of opinion / Matter of fact
"The art of graffiti can be gorgeous and attractive."	Matter of opinion / Matter of fact
"Some graffiti portray clear massages, some do not."	Matter of opinion / Matter of fact

Figure 10. Question developed by Nurma

Figure 10 shows a question developed by Nurma that requires the reader to reflect and evaluate whether the statements belong to the matter of fact or the matter of opinion. Nurma confirms that her ability in developing PISA-like reading tasks was improved as can be seen in excerpt 2.

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Yes, (there is an impact of this training) especially for me. For me, what is clear is that I get more reinforcement about making appropriate questions. I learned in terms of PISA reading knowledge, starting from how to do PISA reading test, to how to form the questions. I learned how to make questions that can enhance students' thinking skills. –Nurma, excerpt 2.

Excerpt 2 revealed that the impact of the training seems to be realized by Nurma as she said that she got more reinforcement about making appropriate reading items.

PISA-like reading tasks developed by Padma Padma also shows her ability in developing PISAlike reading tasks as can be seen in Figure 11.





Figure 11. Texts selected by Padma

Figure 11 consists of continuous, noncontinuous and mixed texts selected by Padma. From the texts, she demonstrated her ability in developing PISA-like reading tasks *Understand: Integrate and generate inferences* cognitive process question as can be shown in Figure 12.

No	NAME	Auto	matior	levels	s in dri	verles	s cars
	- to the	1	2	3	4	5	6
1	hpeaounl						
2	Soyyou07						
3	Fenris						
4	Panama						
5	Quddos						

Figure 11 consists of continuous, non- Figure 12. Understand: integrate and generate ntinuous and mixed texts selected by Padma. inferences developed by Padma

Figure 12 displays complex multiple choice question format created by Padma. This question categorised as *understand: Integrate and generate inferences*.

Padma also increased the item difficulty by producing *Reflect and evaluate: Reflect on content and form* cognitive process question as can be shown in Figure 13.

What is Martha's intention to write the issue in her blog?							
Framework Charac	teristics						
Cognitive Process Integrate and interpret							
Item format	Closed constructed response						

Figure 13. *Reflect and evaluate: reflect on content and form developed by Padma*

The question displayed in Figure 13 is categorised as *Reflect and evaluate: Reflect on content and form.* It is formed on close constructed response.

The findings show the teachers work on PISAlike reading tasks made by teachers. This study explores how teachers develop PISA-like reading tasks. The findings show that teachers were able to develop PISA-like reading tasks by creating questions based on three cognitive processes as suggested by OECD (2019a). The sample of teachers' works were represented by Bakri, Nurma and Padma.

PISA-like reading tasks developed by Bakri

Bakri selected a map for the text and created some questions. As shown in Figure 3, the *locate* information: access and retrieve information within a text task developed by Bakri requires students to locate and sequence multiple pieces of information - the names of stations - and lines. The task simulates a real-life experience that demands careful reading of a non-continuous text. It requires students to locate information by making links across a map. The item was constructed to ensure that use of conditional information - that is, information external to the main part of a text - must be processed in order to complete the task successfully. In this case, the color differences of the lines. This question is designed in a form of close constructed response.

As shown in Table 4, the understand: integrate Å generate inferences question developed by Bakri requires students to integrate and generate inferences on multiple pieces of information - the names of stations - and the duration to go to the destination station and of each stop. It requires students to combine several pieces of information on a map to determine the time needed to travel between two given points. The item was constructed to ensure that use of additional information - that is, information external to the main part of a text - must be processed in order to complete the task successfully. In this case, the time needed to travel between two given points. This question is designed in a form of close constructed response.

As depicted in Table 5, the reading item developed by Bakri is categorised as evaluate & reflect: reflect on content & form. It requires students to reflect and evaluate the form of text, in this case the use of colour as symbols of lane. It requires students to identify the purpose of a graphical feature in a map. It implied that Bakri could create question that require the students to read "beyond the lines" as suggested by Rose and Martin (2012) and OECD (2009; 2019b). The item was constructed to ensure that use of reflection and evaluation on the form of the text. must be processed in order to complete the task successfully. Bakri's comment shows that he was able to make questions based on cognitive processes suggested by OECD (2019a). This comment supported the analysis of PISA-like reading items based on all cognitive processes developed by Bakri. Moreover, Bakri appeared to be aware that teachers' ability to accommodate all questions based on cognitive processes or all reading comprehensions level is important in guiding students to be able to perform their reading skills. This seems to support the notion that teachers has a critical role in asking questions to eventually enhance students' comprehension of the texts (Rose & Martin, 2012).

PISA-like reading tasks developed by Nurma

Nurma also created PISA-like reading tasks based on cognitive process as suggested by OECD (2019a). From the discussion on a comment section about grafitti, she made some questions. As can be shown in Figure 7, the question is categorised as *locate information* cognitive process. In this reading item, students are required to search for and select the relevant text (in this case short arguments stated by students in the comment section) to locate a specific piece of information that is a direct match with the question stem or one of the response options as suggested by OECD (2019a,b). In this item, the student must search through the different comments to find the answer. By providing the correct answer, the student demonstrates that he or she has selected the relevant text ("Rajja"). Once the correct text has been located, a simple match is made between the content within the section on the "action of intentionally damaging a public area" and the options. Thus, while this item encourages engagement with the all the comments, it does not require a deep level of engagement with the relevant text. Here, the answer is (C) Vandalism.

Nurma also created "Understand" cognitive processes question as can be seen in Figure 8. Nurma created simple multiple choice question format. In this item, Nurma demonstrated her ability to create a reading item which requires students to generate inferences from the opinion stated by each person. This item is categorised as understand: integrate and generate inferences because the students need to infer the meaning implied in the discussion forum whether people consider graffiti as an art or vandalism. In this case, the students need to differentiate which statement that implied agreement or disagreement. The task developed by Nurma demonstrated that she applied the principle as noted by Britt et al. (2017) that the students are encouraged to interpret text within a given task situation. This question represents typical active reading.

As shown in Figure 9, the reading item developed by Nurma requires students to draw on their own knowledge and beliefs to evaluate the arguments put forward by the writers, comparing the substance rather than the form of the texts. In the three-aspect categorisation, this task is therefore classified as evaluate and reflect: detect and handle conflict. This item focuses mainly on the element of handling the conflict rather than detecting it. By asking the student to come to a conclusion and use the multiple texts, the student demonstrates how he or she handles the conflict between the information presented in the comment section of a webpage.

The question simulates the processes that readers might engage in as they compare and contrast the opinions of different authors on a topic. One of the typical of active reading approach in encountering one or more written arguments is to compare one's own position with those of the writers. Nurma created a question which requires the student to read two stances provided in the item stem: ones that consider graffiti as an art, ones that say graffiti as vandalism. In order to gain credit for this item. students needed to demonstrate implicitly or explicitly that they understood the main thrust of the argument advanced by their chosen writer, as well as justify their position, either by introducing their own supporting argument or by summarising or interpreting the argument given by the writer. The student can select any of the five people in the scenario associated with these stances, but the student must provide a reason from at least one of the texts to support his or her selection.

cognitive processes question made by Nurma can 2019 a, b; Emilia, 2011; Derewianka and Jones

be seen in Figure 10. Figure 10 shows a question developed by Nurma that requires the reader to reflect and evaluate whether the statements belong to the matter of fact or the matter of opinion. By addressing the "evaluate and reflect" question, she aimed to promote readers' critical thinking skills to distinguish facts from opinion. In the pre-test result which was reported in the bigger study of this project (see Emilia et al., 2022), the most missing question was evaluating and reflecting cognitive processes. However, during the training, there are positive changes indicated by teachers' ability to design the item classified as evaluating and reflecting cognitive processes.

PISA-like reading tasks developed by Padma

Figure 12 displays complex multiple choice question format created by Padma. In this item, Padma demonstrated her ability to create a reading item which requires students to complete a table by selecting the suitable automation level in driverless car for each person. Students must first understand the opinion stated by each person in Text 2 (Figure 11) – online discussion forum, and then integrate it to Text 3 (Figure 11) automation level in driverless car. This item is categorised as *understand*: *integrate and generate* inferences because the students need to infer the meaning implied in Text 2 whether people should start using driverless cars. The task developed by Padma demonstrated that she applied the principle as noted by Britt et al. (2017) that the students are encouraged to interpret text within a given task situation.

Padma also increased the item difficulty by producing Reflect and evaluate: Reflect on content and form cognitive process question as can be shown in 14. It shows that Padma was able to ask question which requires the student to identify the main purpose of the text written by the author of the blog, Martha. It should be noted that the student is not asked to identify the main idea. Instead, the student must understand the overall meaning of the blog and then consider why it is being presented and how it has been written by the author. The student must reflect on the content and form of the text. Here, the correct answer is "to discuss driverless cars". It shows that Padma was able to identify the purpose of the discussion text. The ability to identify the purpose of the text indicate teachers' (especially Padma) understanding of one of the elements of given task in comprehending text discussed in the training, Another sample of evaluate and reflect from both PISA reading and SFL GBA (OECD

2016). This type of question is also still being asked in PISA 2009 (OECD, 2009) and PISA 2018 (2019b). The finding suggests that question developed by Padma as can be seen in Figure 14 is relevant to PISA.

Generally, teachers' responses indicate that the training contributed to the enhancement of their ability in developing PISA-like reading tasks. The teachers appeared to be cognizant of the training program's role in promoting their learning and giving them with the experiences necessary to maximise their capacity for developing PISA-like reading tasks. This supports the findings discussed in on document analysis of teachers' ability in developing PISA-like reading tasks, as shown in the texts they selected and reading items they developed.

CONCLUSION

This study is a partial result of a training program to teach PISA-like reading reported in Emilia et al. (2022). This paper focuses on teachers' ability in designing PISA-like reading tasks. The intervention is framed within PISA reading and SFL genre-based approach. Teachers' ability to design PISA-like reading tasks was observed through the reading items based on cognitive processes as suggested by OECD (2019a.b). Samples of PISA-like reading tasks created by the teachers over the training are presented. The paper has shown that the training program enabled teachers to develop PISA-like reading, proven by the collected reading items, which follow PISA 2018 frameworks (OECD, 2019,a,b). Teachers show their ability to develop reading materials by varying text according to text format, such as continuous, non-continuous and mixed text. In addition, teachers are also able to design tasks following cognitive processes and response format based on the PISA 2018 framework. Moreover, teachers' responses from interview were likewise positive, indicating their increased awareness of PISA and their ability to design similar reading items.

For future direction, it is recommended that the training be conducted in a variety of settings with a larger number of teachers for them to eventually assist Indonesian students in improving their reading literacy as suggested by PISA. For those who are interested in developing PISA-like reading tasks from the lens of text-based instruction, this study may be expanded to the pedagogical practices in the classroom settings to explore the applicability and its influences on the students.

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REFERENCES

- Barzillai, M., Thomson J., Schoeder S. (2018). Learning to read in a digital world. John Benjamins Publishing Company.
- British Council. *The history of graffiti*. British Council. https://learnenglishteens.britishcouncil.org/skill s/reading/b2-reading/history-graffiti
- Britt, M.A., Rouet, J.-F., & Durik, A.M. (2017). Literacy beyond text comprehension: A theory of purposeful reading (1st ed.). Routledge. https://doi.org/10.4324/9781315682860
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. Routledge.
- Derewianka, B., & Jones, P. (2016). *Teaching language in context*. Oxford University Press.
- Education First English Proficiency Index (EF EPI) (2015). *The world's largest ranking of English skills*. EF. http://www.ef.co.id/epi/
- Emilia, E. (2011). Pendekatan genre-based dalam pengajaran bahasa Inggris: Petunjuk untuk guru. Rizqi Press.
- Emilia, E., Sujatna, E. T. S., & Kurniasih, N. (2022). Training teachers to teach PISA-like reading: A case in Indonesia. *Indonesian Journal of Applied Linguistics*, 12(1), 58-78. https://doi.org/10.17509/ijal.v12i1.46534
- Facione, P. A. (2015). *Critical thinking: What it is and why it counts.* Insight Assessment.
- Gozali, I., Lie, A., Tamah, S. M., & Jemadi, F. (2021). HOTS questioning ability and HOTS perception of language teachers in Indonesia. *Indonesian Journal of Applied Linguistics*, *11*(1), 60-71. https://doi.org/10.15294/JED.V7I1.30878
- Halliday, M., & Matthiessen, C. (2014). An *introduction to functional grammar* (4th ed.). Routledge.
- Haw, J. Y., King, R. B., & Trinidad, J. E. R. (2021). Need supportive teaching is associated with greater reading achievement: What the Philippines can learn from PISA 2018. *International Journal of Educational Research*, *110*, 101864. https://doi.org/10.1016/j.ijer.2021.101864

Indonesia Ministry of Education and Culture. (2019, Paul, R., & Elder, L. (2019). A guide for educators to Desember, 4). Hasil PISA Indonesia 2018: akses makin meluas, saatnya tingkatkan kualitas. https://www.kemdikbud.go.id/main/blog/2019/1 2/hasil-pisa-indonesia-2018-akses-makinmeluas-saatnya-tingkatkan-kualitas

- Gess-Newsome, J., Taylor, J. A., Carlson, J., Gardner, A. L., Wilson, C. D., & Stuhlsatz, M. A. M. (2017).Teacher pedagogical content knowledge, practice, and student achievement, International Journal of Science Education, http://dx.doi.org/10.1080/09500693.2016.12651 58
- Khamkong, S. (2018). Developing English L2 critical reading and thinking skills through the pisa reading literacy assessment framework: A case study of Thai EFL learners. The Southeast Asian Journal of English Language Studies, 24(3), 83-94. https://doi.org/10.17576/3L-2018-2403-07
- Larsson, K. (2017) Understanding and teaching critical thinking-A new approach. International Journal of Educational Research. 84, 32–42. http://doi.org/10.1016/j.ijer.2017.05.004
- Lutkevich, B. (n.d). Self-driving car (autonomous car driverless or car). https://www.techtarget.com/searchenterpriseai/d efinition/driverless-car
- Ma, L, Jiao, Y., Xiao, L., & Liu, J. (2022) Moderation of teacher-student relationships in the link between motivation and English performance of struggling learners in China. Journal of Multilingual and Multicultural Development 0:0, pages 1-18.
- Marthablogger. (8 May 2017). Driverless cars: a great or problematic invention? British Council. https://learnenglishteens.britishcouncil.org/blog s/science-technology/driverless-cars-great-orproblematic-invention
- Mo, J. (2019). How does PISA define and measure reading literacy?
- Mullis, I. V., & Martin, M. O. (2019). PIRLS 2021 frameworks. International assessment Association for the Evaluation of Educational Achievement.
- Myrberg, E., Johansson, S., & Rosén, M. (2018). The relation between teacher specialization and readingachievement. student Scandinavian Journal of Educational Research.
- OECD (2017). PISA 2015 Assessment and analytical framework: science, reading, mathematic, financial literacy and collaborative problem http://doi.org/10.1787/19963777
- OECD (2019a). PISA 2018 assessment and analytical framework. OECD Publishing.
- OECD (2019b). PISA 2018 released new reading items. OECD Publishing.

- critical thinking competency standards: Standards, principles, performance indicators and outcomes with critical master rubric. Rowman & Littlefield.
- Putra, T., & Abdullah, D. (2019). Higher-order thinking skill (HOTS) questions in English national examination in Indonesia. Jurnal Bahasa Lingua Scientia, 11(1), 145-160.
- Rahmadina, K., R. & Emilia, E. (2022). Exploring EFL teachers' practice in teaching PISA-like reading. Ranah: Jurnal Kajian Bahasa, 11(2).
- Rose. D., & Martin, J.R. (2012). Learning to write, reading to learn. Genre, knowledge, pedagogy in the Sydney school. Equinox.
- Selvina, D., Inderawati, R., Viantry, M. (2018). Developing pisa-based reading materials in Indonesian context in the form of continuous text. SULE-IC. 3(1), 152-171.
- Singh, R. K. V., & Shaari, A. H. (2019). The analysis of Higher-Order Thinking skills in English reading comprehension tests in Malaysia. Geografia, 15(1).
- Snow, C. E., Griffin, P., & Burns, M. S. (Eds.). (2005). Knowledge to support the teaching of reading: Preparing teachers for a changing world. Jossey-Bass.
- Stromso, H.I. (2017). Multiple models of multiple-text comprehension: A commentary. Educational Psychologist, 52(3), 216-224.
- Stupplea, E. J. N., Maratosa F. A., Elandera J., Hunt, T. E., Cheung, K. Y. F. & Aubeeluck, A. V. (2017). Development of the Critical Thinking Toolkit (CriTT): A measure of student attitudes and beliefs about critical thinking. Thinking Skills and Creativity. 23. 91–100. https://doi.org/10.1016/j.tsc.2016.11.007
- Tvas, M. A., Nurkamto, J., Marmanto, S., & Laksani, H. (2019, October). Developing higher order thinking skills (HOTS)-Based questions: Indonesian EFL teachers' challenges. In Proceedings of the International Conference on Future of Education, 2(1), pp. 52-63.
- Van de Oudeweetering, K., & Voogt, J. (2017). Teachers' conceptualization and enactment of twenty-first century competences: Exploring dimensions for new curricula. Curriculum Journal, 29(4), 1-18.
- Yasinta, I., N., Hamsa, A., Usman. (2022). The ninth graders' pisa-based reading literacy competence. Curriculla: Journal of Teaching Learning. and http://dx.doi.org/10.22216/jcc.2022.v7i1.919
- solving. Paris, France: OECD Publishing. Zaim, M., Refnaldi, R., Zainil, Y., & Ramadhani, F. (2021). PISA reading literacy assessment and reading literacy assessment at senior high school: How do they differ? International Journal of Research in Counseling and 72-78. Education, 5 (1),