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Helping Students Make Sense of New Material Through the "I Notice I Wonder" Method

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Abstract

When a student becomes an active doer during the learning process, the advantage of their mindset can be realized. The understanding process started when the teacher created a class atmosphere that attracted student's curiosity. By throwing questions such as "What do you notice?" and "What do you wonder?", the teacher helps students to look at problems from a wider angle. This will improve students' confidence, reflective skills, and student's involvement, it reveals that the aim of studying is not only for completing assignments but also for finding strategies to overcome problems. This will result in a classroom space full of student's thoughts and ideas that contain curiosity. Sometimes, the process of apperception in the learning process is not fully utilized by the teacher to help students connect the relationship between previous and future material. Thus, students frequently tend to feel confused in understanding the material as a whole. The I Notice I Wonder method was invented to facilitate and ease teachers in utilizing the apperception process as a means to involve students to be a thinker and actor during active learning, and also to commit authority over students to be active doers by appreciating their opinions and ideas. This study focuses on the importance of the teacher's role during the apperception process in order to help students understand the connectedness between topics of materials.

Keywords: Apperception Process, "I Notice I Wonder" Method, New Material

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Abstrak

Ketika siswa menjadi pelaku aktif dalam pembelajaran, keuntungan dari cara berpikir mereka dapat terwujud. Proses pemahaman dimulai ketika guru menciptakan ruang kelas yang mendorong rasa ingin tahu siswa. Dengan pertanyaan seperti "what do you notice" dan "what do you wonder?", guru membantu siswa melihat masalah secara lebih luas. Ini meningkatkan kepercayaan diri, keterampilan reflektif, dan keterlibatan siswa, menunjukkan bahwa tujuan pembelajaran bukan sekadar menyelesaikan tugas, tetapi menemukan strategi untuk mengatasi masalah. Hal ini akan membantu guru menciptakan ruang kelas yang penuh dengan pemikiran dan gagasan siswa yang penuh dengan rasa ingin tahu.Terkadang proses apersepsi dalam pembelajaran tidak banyak dimanfaatkan oleh guru untuk membantu siswa melihat keterhubungan antara materi sebelumnya dengan materi yang akan diajarkan, sehingga siswa tidak jarang mengalami kebingungan dalam memahami materi secara utuh. Metode I Notice I Wonder hadir untuk memfasilitasi guru dan memudahkan guru dalam memanfaatkan proses apersepsi untuk melibatkan siswa sebagai pemikir dan pelaku dalam pembelajaran yang aktif, juga memberikan otoritas kepada mereka untuk menjadi active doers dengan menghargai suara dan ide mereka. Tulisan ini menyoroti pentingnya peran guru, pada proses apersepsi untuk membantu siswa memahami keterhubungan antar topik pembelajaran. Penulis juga menawarkan solusi untuk masalah yang dihadapi guru terkait apersepsi, menggunakan metode kualitatif deskriptif untuk menjelaskan proses pembelajaran dan metode pembelajaran yang disarankan.

Kata Kunci: Proses Apersepsi, Metode I Notice I Wonder, Materi Baru

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INTRODUCTION

In the learning process, the learners generally experience problems while understanding the material that is being taught, as when a new material has emerged, the previous material will be automatically forgotten by the learners, apperception is needed to solve such problem. The apperception process is sometimes neglected by teachers whereas this process is the key to connect student's knowledge from previous material to a new one that will be taught by the teacher. Sometimes students have a view that some of the materials are completely different and they have no relationship, this condition sometimes confuses students. There is a relationship between materials, it is the duty of the teacher to activate the students' metacognitive in this apperception process. Suhana (in Handayani et al., 2019) stated that apperception is one of very important elements in the learning process as it possesses some advantages. One of the advantages is improving students' understanding of material as new knowledge will be easily accepted if the previous one has been connected by the student during the apperception process.

Several interviews with some teachers revealed the result of teachers' views toward the apperception process. Teachers often skip this process and tend to go straight to the main learning process, they have no idea of how to make the apperception process to be more interesting. Most teachers only propose some questions to review the previous material, check the student's attendance and feelings, or propose some questions in order to stimulate the student's knowledge about the next materials for the apperception process. In fact, apperception is an important process which is one of the whole learning processes. It is mandatory for teachers to have a particular technique or method to execute this process (Roller, 2019).

For students, the process of understanding the connectedness between previous and future material is rather confusing. A new material does not feel to have any similarity with the previous one for the student. Such a process is called apperception in order to help students understand and find the connectedness between materials. Teachers must possess various methods and techniques. Munif (in Ramdiana, 2020) stated that the first minutes of the learning process is the most important time for the next one learning hour. It is supported by a study conducted by Pakungwati (in Octaviani et al., 2020) that stated learning with apperception improvement and handing out assignments can improve student comprehension. According to the fact stated above, some teachers still have no exact idea about what activity must be done during the apperception process. That is why, some of them chose to neglect the process.

The objective of this study is to inform the importance of the apperception process as a part of the learning process. The paradigm of apperception as the insignificant process during learning needs to be changed. Another aim of this study is most studies only focus on the method or learning model that is used in a classroom. Whereas, a perception process also plays an important role during the learning process in order to help students understanding the material.

Based on the whole learning process, student's metacognitive muscles are involved during the apperception process. One of technique or method that can be used by teachers to help students understand the connectedness of new and previous material is a method called *I Notice I Wonder*. It is a method when students spend a couple of minutes of their time to express and write the facts and information they gained about the new topic. Next, they discuss it with their partner and they will share or write about what they want to know about that material that will push their abstract thinking ability.

The strategies implemented by teachers to address bullying in elementary schools vary depending on the school conditions, the culture of the environment, and the characteristics of the students. Some common approaches include establishing clear anti-bullying policies, raising awareness through character education, strict supervision in the school environment, and individual approaches to students involved in bullying problems, either as perpetrators or victims. Through the implementation of these strategies, it is hoped that teachers can create a safe, supportive environment and promote values of harmony

and respect for differences among students. Thus, efforts to reduce and prevent bullying in elementary schools can be more effective, efficient, and sustainable.

METHODS

This study applies literature review as one of the data collection techniques. The author gathered several sources regarding the problems of the study and offered one concept as a solution toward the problem. Researchers also applied interviews in the process in order to collect data about the apperception process during learning. After the process of analysis which is to determine the harmony between the data in the literature for other sources with facts occurred in the field. The writers offer a method as a solution in order to overcome problems faced by teachers in the classroom. The researchers used several sources regarding the concept of *I Notice I Wonder* and related education concepts and learning, and self-developed a learning design let use the method during the process of apperception.

RESULTS AND DISCUSSION

Appreciation Difficulties at School

Apperception is a process that cannot separated from steps of learning. Apperception plays an important role in helping students understand new material and find connectedness between previous material that has been taught and future material that is going to be delivered.

During the learning dissemination program in the digital era, the writers have interviewed some teachers at school, they are Ms. Arni Mahmud, S.Pd, Ms. Sarini Laindjong, S.Pd and Ms. Indri Aprilia, S.Pd.

Ms. Arni Mahmud, S.Pd, one of the teachers in Gorontalo city, stated that the process of apperception left her in confusion, and she even sometimes neglected the process. Ms. Arni revealed that she was checking attendance and doing other simple activities such as checking the condition of the student as part of a perception process in her class. Whereas, the process of apperception should be a wide complex study and involve the metacognition process of the student.

Figure 1. Attending Ms. Arni Mahmud, S.Pd Class

In accordance with the result from another interviewee who is a teacher in Gorontalo city, Ms. Sarini Laindjong, S.Pd, she stated that she knew about the apperception process but never used a particular method or technique for that process. Ms. Sarini only utilised the process of perception to ask about the condition of the student, check attendance, and make sure the student was ready for the next lesson.

Figure 2. Interview Process with Ms. Sarini Laindjong, S.Pd

A different result was found from another source which is a teacher of Sempu Serang Banten 1 Elementary School, Ms. Indri Aprilia, S.Pd, the interview took place virtually. She showed sufficient comprehension regarding the apperception process. She stated that she often used a quiz or games during the apperception process. Ms Indri also throws triggering questions often in

order to help students recall the previous material. She was also aware that apperception is an important learning process so that students will not be confused when to start a new material and they will be able to find connectedness between materials.

Researchers also initiate an interview with several students about their understanding of the material and ask students about their teacher activity during the apperception process. The result shows that students sometimes feel confused because the given material has no correlation with other materials and it, somehow, feels strange.

Promoting Student Metacognition

Some psychology disciplines have developed a new concept of metacognition. The majority of the concentration of their study is learning process or metacognitive from an education and development point of view. Nowadays, metacognition interest is increased toward more complex cognitive activities such as problem-solving, reasoning, and decision-making (Lebuda & Benedek, 2023). The term metacognition and related research, developed by a psychologist, John Flavell in the 1970s, have been developed for the last four decades. Although metacognition is implemented in various disciplines, the simplified definition is hard to find in the literature.

Flavour in his article stated that metacognition refers to a person's knowledge about his or her cognitive process or anything related to it. Such as relevant characteristics with learning or data information. For example, the student will be involved in metacognition if that student is aware that he or she faces more problems during material A than material B, another example is the student must recheck the C before considering it as a fact. Avargil et al. (2018) stated that metacognition is generally a main feature in *life long learning*, and specifically a main feature in science. Metacognitive involvement is the key to an advanced conceptual understanding about scientific ideas.

The learning process stage that usually involves student metacognition is apperception, as in this stage students will be able to find the connectedness between previous and future material taught by the teacher ideally. Unfortunately, sometimes students find the materials as puzzle fragments that are impossible to connect. Thus, according to Ozturk (2015), it is an urge for teachers effort to help students solve the puzzles in accordance with their previous knowledge, how the material will strengthen the concept, or reveal the gap in their knowledge.

Metacognition, which already represents more than the skill of studying, has been connected with the improvement of thinking ability and supports the conceptual change on students' level. It is in accordance with a study conducted by Rickey (in Muteti et al., 2021) stated that metacognitive ability improvement is associated with advantages of the result of student's learning, such as conceptual understanding improvement, problem-solving, and scientific performance improvement.

The understanding of the metacognition concept must be possessed by material teachers and prospective teachers at the undergraduate level as they will become material teachers in future. By understanding the metacognition concept, it is expected from prospective teachers to be able to implement the concept as a useful strategy in order to achieve learning objectives. Guiding students to learn metacognition in order to understand how they think about materials will provide important steps into a whole new level of advanced thinking.

Practically, metacognition is best understood as a process of planning, monitoring, evaluation and regulation that are interconnected to each other in associated with the learning process for students. Idris et al. (2021) stated that the difference between cognitive skills and metacognition is cognitive focus on the help to study of how to maximize brain capacity. Meanwhile, cognitive strategy is one of strategy used by learners in order to achieve more successful study. Metacognitive study is what the students do when they think about how they are thinking. This strategy can help students to be learners who can manage and develop strong feelings to urge in their learning process. In short, cognition is the ability to finish an assignment. On one hand, metacognition is an understanding of how to do it, it covers the awareness of knowledge, bias, gap, and process of our learning.

For example, Branigan & Donaldson (2020), one approach to facilitating metacognition in elementary classrooms is through a specific structuralized thinking activity with a clear journaling method, it aims to urge students to think about their idea and reflect it in previous and future materials. The relationship between STA and metacognition improvement has been implemented at the middle and higher school levels. History subjects also find advantages by applying this cognition, as historical facts are collected by interpretation and data filtering process which is strongly connected to the metacognitive process.

Andriani & Mbato (2021) stated that applying metacognition in the student learning process involves metacognitive strategy and common strategies are chosen to support and facilitate the learning process. This metacognitive strategy is used to monitor and regulate the student learning process (Rahman, 2020). Jjork (in van Loon et al., 2021) added, that to be an effective learner means to ascertain and flexibly implement the cognitive strategy which is an activity and strategy that improves memory, understanding, and information implementation, and involves metacognitive strategies which are Planning, Monitoring and Evaluating. Supported by Fitri et al. (in Widiana et al., 2024), metacognition is the ability to understand, control, and manage the thinking and learning process of students, sometimes it covers the awareness of learning strategy, monitor the understanding and manage needed action in order to achieve learning goals. That is why, teachers as educators need to design a specific model that helps students to involve and strengthen their metacognitive which will lead to the improvement of learning quality.

Such a process could represent the act of strategy and plan that starts from the lesson plan's implementation, evaluation, and return to a new action plan. The nature of metacognition shows that metacognition is a process that benefits learning improvement. Research by Ornstein et al. (in van Loon et al., 2021) showed that teacher instruction about metacognitive strategy affects students' short- and long-term learning. That is why, metacognition is an important aspect of learning. Without metacognition, the student may not be able to achieve success in class and they will not have a proper learning strategy for the rest of their learning process.

"I Notice I Wonder" Concept

This concept was introduced by the National Council of Teachers of Mathematics who claimed to be able to help students to be "*active doers*" in learning. This concept can be implemented to almost all education levels and all materials, teachers are expected to be able to understand the concept and adjust to the material and student's age. Results of a study done by Anderson & Dobie (2022) find that this method can also support the development of the teacher profession and exposure toward various perspectives.

Teacher in any subject can practice creativity by applying this method, especially for the apperception process that aims to help students understand future related topics and previous materials that have been dealt with. So that, students will not be confused with the topics and not find them as stand-alone material (Planas et al., 2023).

The introduction of new material as part of the regular rhythm in class that belongs to the apperception stage before entering the main lesson. But, as stated by the researcher before in the introduction, it is not only the student who experiences confusion but also the teacher. That is why, this process is often neglected and they tend to go straight to the main lesson. Whereas, this process is an important stage along with the main lesson that can also decide the understanding level of students toward the material. Moreover, Tabuzo (2023) stated that *I Notice I Wonder* provides a metacognitive strategy that can help students with low comprehension levels to apply advanced thinking, meanwhile, a student with high levels of comprehension can even improve their thinking ability to a higher level.

I Notice I Wonder can be implemented with simple stages. As quoted by Acosta (in Anderson & Dobie, 2022), in the article, in order to bring students into a new material, teachers can provide students with pictures or video media about the next material. Then, the student is requested to write down several things about what they notice in that new material. After that, they can discuss with their partners things they wonder to know about the

next material. According to Acosta, the activity will push students to think in abstract. This method will help students feel confident by letting them explore what they know and what they do not know regarding the new material. Dobie & Anderson (2021) added this routine instruction will provide a space for students to interact with their friends, triggering creativity and curiosity, empowering students, growing a positive learning process, and granting authority for students to speak up.

As already explained by Flavell before, metacognition refers to someone's knowledge about the process of their cognition. It refers to what extent or what material they understand the most or the least (knowledge gap). Young (in Barlow, 2020) revealed that in the stages of *I Notice I Wonder*, from observing pictures or videos, and discussing with seatmates in order to find their lack of understanding or what they have missed, teachers already provide students with the chance to think independently or ask questions about the new material. A teacher also empowers students to be actively involved during the learning process. The last stage is to ask the student about what they want to know which will lead to the opportunity for the teacher to inspect the possibility of the student's need for the next instruction in order to achieve an advanced understanding of the material and eventually force them to reflect their knowledge gap (Lowe et al., 2013).

The researchers provide an example of *I Notice I Wonder* implementation during the apperception process at the elementary school level with Pancasila Education subject as mentioned in this lesson plan below:

School Name : SDN X
Subject of Study : Pancasila & Civic Education
Grade / Semester : 1 / 1
Main Material : Code of conduct
Time Allocation : 1 x 30 Minutes

Table 1. Basic Competencies and Competence Achievement Indicators

Basic Competencies	Indicators
1.2 Show obedience toward following religion in daily life at home.	1.2.1 Fulfil obedience toward followed religion in daily life at home.
2.2 Implement applied rules in daily routines at home.	1.2.2 Follow applied rules in daily routines at home.

Method : Discussion, Question and Answer, Assignment, and Demonstration
Model : CTL

Table 2. Learning Stages

Activity	Character Building	Time Allocation
INTRODUCTION: **Class conditioning** • The teacher starts the class with greetings. • The teacher and student say prayers together to start the activity.	Religious Polite	5 minutes
Apperception (*I Notice I Wonder*) • The teacher provides students with several images from a projector as a learning orientation. • The student is requested to observe the picture for 5 minutes. • The student is requested to do verbalise (explain) or write down facts and information they know about the picture. • The student is requested to discuss with a friend about the picture they observe and write down. • Next, students write down or tell what they have thought.	Active	
Orientation The teacher delivers the next material about the code of conduct at home and school.		

Motivation The teacher provides motivation for students in order to be serious and active during the learning process.		
MAIN **Exploration** • The teacher plays an animation video of "Pergi Belajar" • The teacher explains the relation between video and material. **Elaboration** • The teacher plays a video about the behaviour of code of conduct at home and school. • The student observes video about the behaviour of code of conduct at home and school. • Student and teacher commence discussion and answer questions. • The teacher explains the consequences of not following the code of conduct at home and school. **Confirmation** • The teacher gives appreciation to students who answered the question, responded to the answer, and elaborated on the material.	Curiosity Accurate, Curiosity, Self-confident	20 minutes
CLOSING • Student takes on independent evaluation assignments and discusses them together. • The teacher gives a message to students to be diligent in studying for the next material. • The learning process is finished with prayers.	Religious	5 minutes

According to the lesson plan above, *I Notice I Wonder* is implemented during the apperception process which is specifically highlighted in blue font. But this method can also be implemented during the main learning process, or it can be combined with other methods in the learning process.

Discussion

In the last decades, the trend of metacognition research attracted enough attention especially about the ability of student's metacognitive in general education (Tanner, 2012). This trend is reflected in the Google Scholar search engine. There have been thousands of metacognition research in the last five years. The data is in contrast with the trend of student's metacognitive research during the apperception process (Mok et al., 2024).

That is why, it is time for us to take a closer look at the importance of involving student's metacognition during the apperception process. As stated at the beginning of this study, utilizing apperception during the learning process is very important, especially involving students' metacognitive, this is the difference between this study with previous studies that had been conducted in the last five years (Rumack & Huinker, 2019; Moldavan et al., 2024). Another different method that the writers offered in this study is the use of *I Noticed I Wonder*, it is also a method that is popular used by researchers in Indonesia, the design, according to researchers, is proper to be tested and applied in the learning process.

CONCLUSION

The rational reason for the apperception process's importance as part of the rhythm or learning process in the classroom is that students and teachers sometimes experience confusion. Teachers cannot decide about what material they need to prepare in this process and tend to neglect it. Students are confused

with a new material which is totally different from the previous one and they tend to miss the connectedness between materials. The aims of the teacher in the learning process depend on the method chosen by the teacher in delivering process. *I Notice I Wonder* method is expected to help students improve their metacognition. Thus, the student is fully aware of their knowledge and also the gap in it. Meanwhile, for the teacher, *I Notice I Wonder* is expected to facilitate the teacher's creativity in managing the learning process, especially during the apperception process. With well-executed performance and enough procedure mastery, teachers will be able to create a fun learning process in elementary school without leaving the educative element.

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