INQUIRY-DISCOVERY EMPOWERING HIGH ORDER THINKING SKILLS AND SCIENTIFIC LITERACY ON SUBSTANCE PRESSURE TOPIC

by Muhammad Nur Hudha

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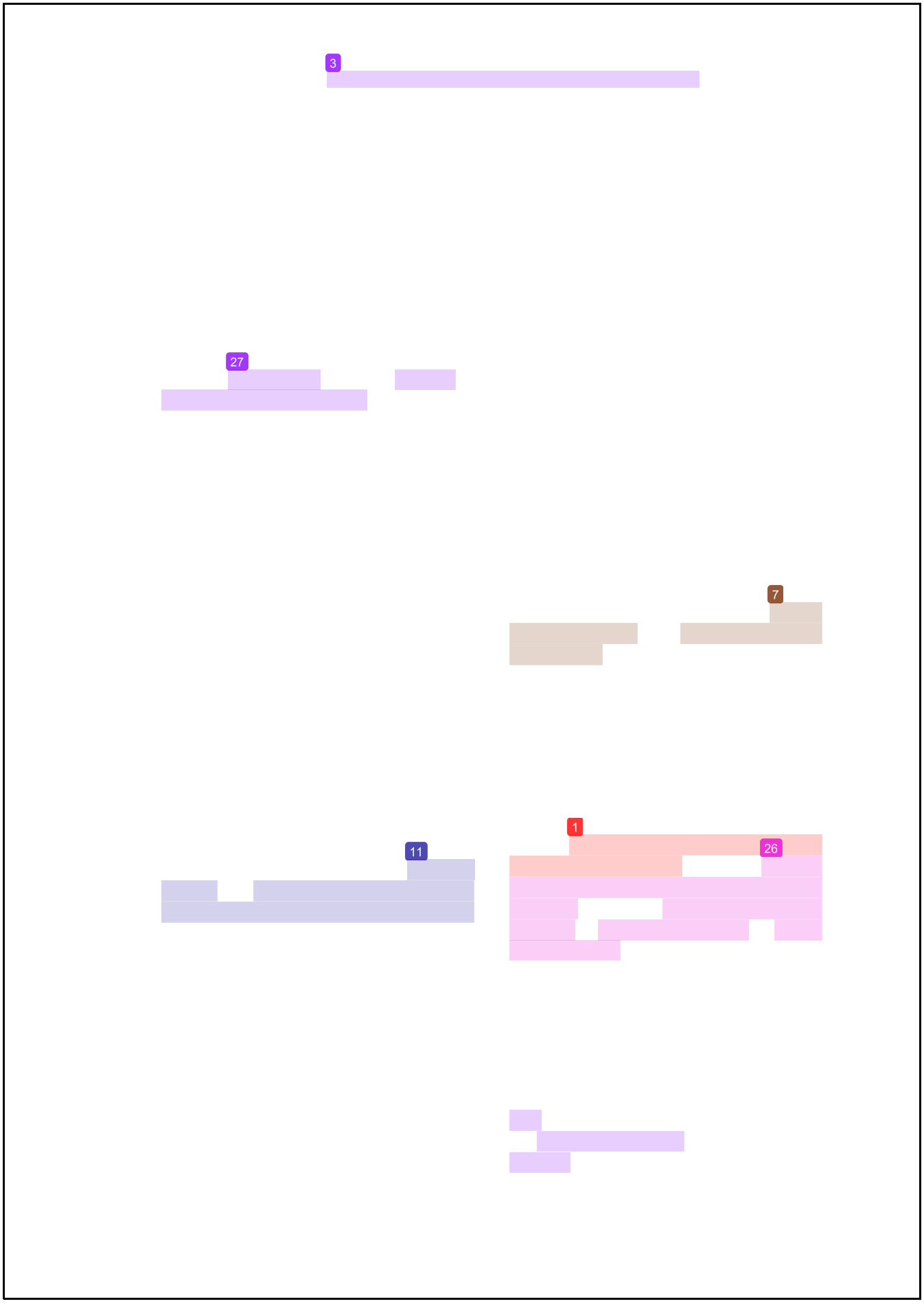
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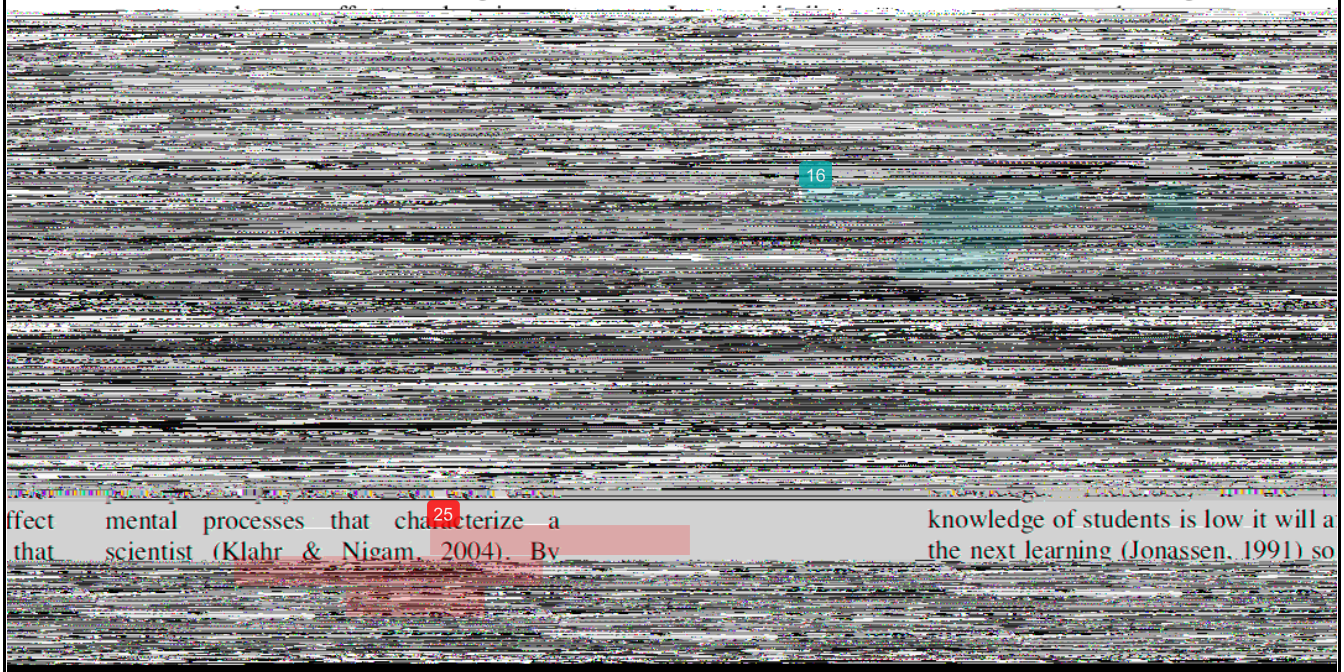
next higher learning. A student who has the good initial ability will more quickly understand the learning material so that it

for students to find themselves without the help of teachers (Saab, Van Joolingen, & Van Hout-Wolters, 2005). Learning



ffect mental processes that characterize a that scientist (Klahr & Nigam, 2004). By

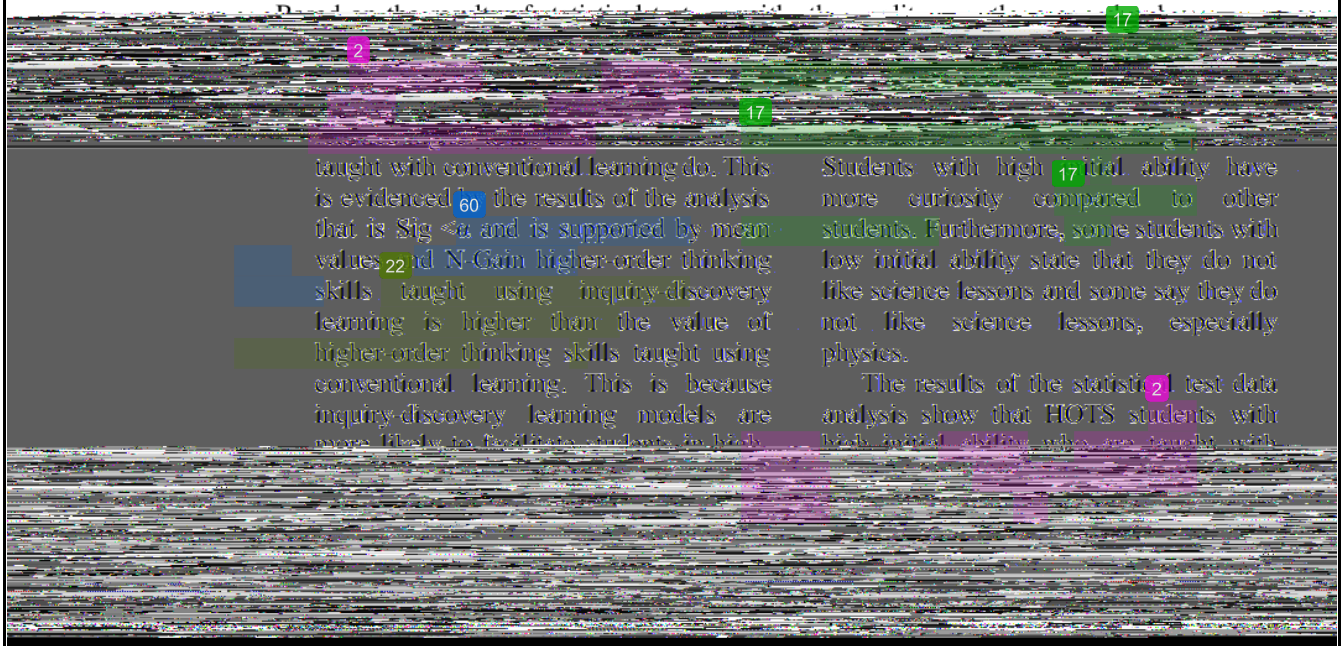
knowledge of students is low it will a the next learning (Jonassen, 1991) so

learning had Sig> α (0.387> 0.05) and the results of the test of scientific literacy homogeneity using conventional learnin had Sig> α (0.723> 0, 05). Therefore, it can be concluded that the value of scientific literacy comes from a homogeneous group

shows that Sig <α (0.003 <0.05). H_0 is rejected, and H_1 is accepted so that it can be concluded that the students' high-order thinking skills with low initial abilities who are taught with inquiry-discovery learning are higher than students taught with conventional learning

can be concluded that students' scientific literacy with low initial ability taught by inquiry discovery is higher than students taught with conventional learning.

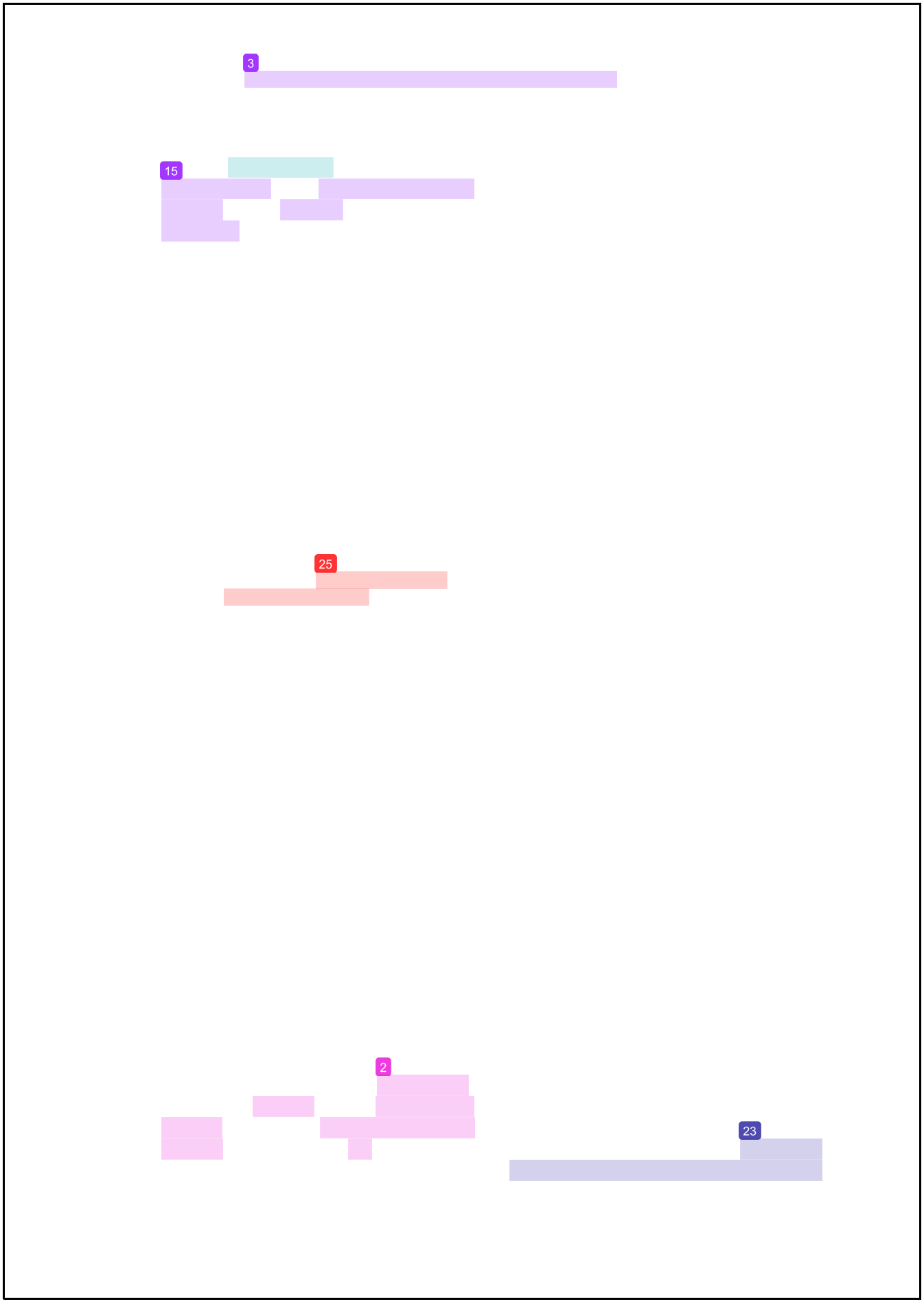
learning with initial abilities and conventional learning with initial ability does not influence each other on HOTS in matter pressure. This is in accordance



taught with conventional learning do. This is evidenced by the results of the analysis that is Sig <α and is supported by mean values and N-Gain higher order thinking skills taught using inquiry discovery learning is higher than the value of higher order thinking skills taught using conventional learning. This is because inquiry discovery learning models are

Students with high initial ability have more curiosity compared to other students. Furthermore, some students with low initial ability state that they do not like science lessons and some say they do not like science lessons, especially physics.

The results of the statistical test data analysis show that HOTS students with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literacy. Therefore, it helps them to get used to working on literacy questions. The results of interviews with students with high initial abilities also said that they had the intention to learn on their own and had more curiosity; this was seen during the learning process.

The results of statistical test data analysis also showed that the scientific literacy of students with low initial ability who were taught with inquiry-discovery learning was higher than students taught with conventional learning. Based on the results of interviews with some students with low initial abilities who learned to use inquiry-discovery learning said that they got better grades from the pre-test because they had carried out the practicum and watched the video of material application learned and enough exercises, even though they still have not achieved minimal mastery in the posttest scores. The results of interviews with students with low initial abilities also said that they did not like science lessons, especially physics.

The results of this study are similar to research (Mawardini, Permanasari, & Sanjaya, 2015), which shows that the achievement of the average scientific literacy of high group students is better than the students of the medium and low groups, and the students in the medium group are better than the low group students. Inquiry-discovery learning invites students to search for concepts by practicing and emphasizes learning through experience (Tompo et al., 2016).

The success of inquiry-discovery learning occurs because the direct role of students in exploring the material through the practicum with directed steps in this learning and can make students more independent and responsible. This is consistent with the advantages of inquiry-discovery learning that is student-centered, and knowledge will last longer or be easier to remember (Vlassi & Karaliota, 2013). Based on this, this learning can help students obtain good learning outcomes because the knowledge or knowledge they gain can last a long time and is easy to remember.

CONCLUSIONS AND SUGGESTIONS

Based on the results of data analysis and discussion, it can be concluded that the high-order thinking skills of students taught with inquiry-discovery learning are higher than students taught with conventional learning. There is no interaction between inquiry-discovery learning and higher-order thinking skills in terms of initial abilities. Higher-order thinking skills of high initial abilities students who were taught by inquiry-discovery learning are higher than students taught with conventional learning. Higher-order thinking skills of low initial abilities students taught by inquiry-discovery learning are higher than students taught by conventional learning. Scientific literacy of students who were taught with inquiry-discovery learning is higher than students taught with conventional learning.

There is an interaction between inquiry-discovery learning to scientific literacy in terms of initial abilities of students' scientific literacy with high initial abilities that were taught with inquiry-discovery learning. They achieved higher than students taught with conventional learning. Furthermore, scientific literacy students with low initial abilities who are taught with inquiry-discovery learning are higher than students taught with conventional learning.

Thus, inquiry-discovery learning models can be recommended in increasing HOTS and SL students. Teachers are expected to measure other activities of students in improving learning and learning outcomes of students' physics.

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