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LITERATION SKILL TO IMPROVE HIGHER-ORDER THINKING SKILLS IN ELEMENTARY SCHOOL STUDENTS

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ABSTRACT

Higher-order thinking skill is closely related to literacy skills. However, data from PIRLS 2011 states that the reading ability of elementary school students in Indonesia is relatively low because it is ranked 42 out of 45 countries. Data from PISA 2018, Indonesia ranked 74 out of 76 countries. Though literacy skill influences mindset. The purpose of this study is to explain: a) the basic concepts of literacy, b) the basic concepts of High Order Thinking Skills, and c) the literacy skill to improve high order thinking skills in elementary school students. The approach used in this study is qualitative. The research method used is content analysis. The data sources are journals and books related to literacy and high order thinking skills. The results of this study are: first, literacy is the ability to interpret information critically and can convey knowledge to others accurately. Second, higher-order thinking skills is the process of thinking students at a higher level of knowledge from various cognitive concepts such as analysis, synthesis, evaluation, and creation. Third, literacy skills improve higher-order thinking. The strategies used by schools include conditioning literacy-friendly physical environments, seeking social and affective situations as literate models of communication and interaction, and striving schools as a literate academic environments.

Keywords: literacy; HOTS; elementary school

INTRODUCTION

In the Millennium Era and the Industrial Revolution 4.0, students must be able to think critically, creatively, analytically, and solve problems. According to Cahyana, critical thinking is a clear and directed process that is used in mental activities. The type of this mental activities such as solving problems, making decisions, persuading, analyzing assumptions, and conducting scientific research.[1] This statement was confirmed by the report of Muhadjir Effendi, Minister of Education in 2016-2019, who said that the first thing a person will do in action is thinking.[2]

[1] Ucu Cahyana, Abdul Kadir, dan Monalisa Gherardini, "Relasi Kemampuan Berpikir Kritis Dalam Kemampuan Literasi Sains Pada Siswa Kelas IV Sekolah Dasar," *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan* 26, no. 1 (12 Mei 2017): 14–22, https://doi.org/10.17977/um009v26i12017p014.

[2] Kompas Cyber Media, "Mendikbud Imbau Guru Kembangkan Pembelajaran HOTS," KOMPAS.com, November 12, 2018, https://edukasi.kompas.com/read/2018/11/12/21323171/mendikbud-imbau-guru-kembangkan-pembelajaran-hots.

One of the higher-order thinking skills is critical thinking competency.[3] The higher-order thinking skills process is closely related to literacy skills.[4] This statement is also relevant to Dinni's research conclusions. Dinni said that mathematics literacy skills and higher-order thinking skills were concerned not only to the ability to count alone, but also literacy to apply mathematics in daily life to solve problems. Mathematical literacy skills are also related to communication skills.[5] Thus the literacy and HOTS activities are essential to build student's critical thinking skills.

The data from PIRLS in 2011 showed the Indonesia position in ranked 42 out of 45 countries. Indonesia score of 428 from an average rating of 500. Meanwhile, the reading literacy test in PISA 2009 showed Indonesian students ranked 57th with a score of 402 (average score OECD 493). In 2016, the *Indonesian National Assessment Program* (INAP) or *Assessment Kompetensi Siswa Indonesia* (AKSI) tested the reading, mathematics, and science skills of fourth-grade elementary school students. Specifically, in reading, the results are 46.83% in the poor category, 47.11% in the moderate group, and only 6.06% in the good category.[6] The data from PISA in 2018 showed Indonesia is ranked 74 out of 76 countries.[7] From these data, the reading ability of elementary school students in Indonesia is quite low.

Many studies show that literacy skills can improve HOTS, as has been done by Asih Asiati, who stated that reading comprehension skills and high-level thinking skills contribute to scientific literacy skills together in Biology teachers in Bekasi.[8] However, the study used research subjects from high school teachers in Bekasi. On the other hand, Ucu Cahyana also researched elementary school students, which resulted that there was an influence in the application of the Creative Problem Solving (CPS) and problem Posing

[3] Yoki Ariyana et al., *Buku Pegangan Pembelajaran Berorientasi Pada Keterampilan Berpikir Tingkat Tinggi* (Jakarta: Direktorat Jenderal Guru dan Tenaga Kependidikan Kementerian Pendidikan dan Kebudayaan, 2018).

[4] Kisyani-Laksono et al., *Desain Induk Gerakan Literasi Sekolah*, 2nd ed. (Jakarta: Direktorat Jenderal Pendidikan Dasar dan Menengah Kementerian Pendidikan dan Kebudayaan, 2018).

[5] Husna Nur Dinni, "HOTS (High Order Thinking Skills) dan Kaitannya dengan Kemampuan Literasi Matematika," *PRISMA, Prosiding Seminar Nasional Matematika* 1 (2018): 170–76., https://journal.unnes.ac.id/sju/index.php/prisma/article/view/19597.

[6] Kisyani-Laksono et al., *Desain Induk Gerakan Literasi Sekolah*.

[7] OECD, *PISA 2018 Results Combined Executive Summaries Volume I, II, & IIII* (Paris, Perancis: OECD Publishing, 2019).

[8] A Susiati and M Miarsyah, "Hubungan Kemampuan Membaca Pemahaman Dan Kemampuan Berpikir Tingkat Tinggi Dengan Kemampuan Literasi Sains Guru Biologi," *Biosfer: Jurnal Pendidikan Biologi* 11, no. 1 (2018): 1–12., http://journal.unj.ac.id/unj/index.php/biosfer/article/view/5363.

methods, as well as the ability to think critically about scientific literacy. [9] In previous studies, no one has specifically examined the relationship between literacy skills in increasing HOTS in elementary school students. In this study, the author explains, first, the basic concepts of literacy; second, the basic concepts of Higher-Order Thinking Skills; and third, the analysis of the relationship of literacy to improve high-level thinking skills in elementary school students.

RESEARCH METHODS

The approach used in this study is qualitative. The research method used is content analysis. Content analysis is a study that combines original research, systematic, planned, retrospective observation, and formal statistical analysis. The data sources in this article are journals and books related to literacy and high order thinking skills, which are *Gerakan Literasi Sekolah's* book dan *Pembelajaran pada Keterampilan Berpikir Tingkat Tinggi* book.

RESULT AND DISCUSSION

Basic Concepts of Literacy

In terms, the word "literacy" comes from the Latin literature (littera), which is equivalent to the word letter in English that refers to the meaning of "reading and writing ability." Definition of the literacy is "the ability to read and write," which then developed into "the ability to master the knowledge of a particular field." [10]

Literacy is not just reading and writing, but also the literacy is also how to communicate in the community.[11] The UNESCO Declaration also mentions that literacy is meaningful as a practice and social relationship related to knowledge, language, and culture.[12] Kern also defines the meaning of literacy. He states that literacy is the use of socially, historically, and culturally-situated practices of creating and interpreting

[9] Cahyana, Kadir, and Gherardini, "Relasi Kemampuan Berpikir Kritis Dalam Kemampuan Literasi Sains Pada Siswa Kelas IV Sekolah Dasar."

[10] Farid Ahmadi and Hamidulloh Ibda, *Media Literasi Sekolah: Teori Dan Praktik* (Semarang: CV. Pilar Nusantara, 2018).

[11] The Partisipants of The Information Literacy Meeting of Experts, "The Prague Declaration 'Towards An Information Literate Society'" (UNESCO, 2003), http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/PragueDeclaration.pdf.

[12] "The Alexandria Proclamation on Information Literacy and Lifelong Learning (2005)," Media and Information Literacy Clearinghouse, October 25, 2011, https://milunesco.unaoc.org/mil-resources/the-alexandria-proclamation-on-information-literacy-and-lifelong-learning-2005/.

meaning through texts. It entails at least an implicit awareness of the relationship between textual conventions and their contexts of use and, ideally, the ability to reflect critically on those relationships. Because it is purpose sensitive, literacy is dynamic-not static-and variable across and within discourse communities and cultures. It draws on a wide range of cognitive abilities, on knowledge of the written and spoken language, on knowledge of genres, and cultural knowledge.[13] Literacy is a vital thing for everyone to have. Besides, one must have the literacy skills required to participate in society and part of basic human rights regarding lifelong learning.

Law No. 3 of 2017 concerning the Literacy Bookkeeping System formulate the definition of literacy as "the ability to interpret information critically so that everyone can access science and technology as an effort to improve the quality of life." According to the World Economic Forum (WEF), students need 16 skills to be able to survive in the 21st century. These skills, namely basic literacy, competency, and character. Literacy is how students apply literacy skills to everyday life. Meanwhile, competency is how students respond to complex challenges. Besides, the character is how students respond to environmental changes.[14] The following is Table 1 describing the skills of the 21st century.

Table 1
The Skills of the 21st Century[15]

	SKILLS	DEFINITION
LITERATION FOUNDATION	Literacy	It is the ability to read, understand and use written language
	Numeration	It is the ability to apply for numbers and other symbols. The purpose of it is to understand and express quantitative relationships.
	Science Literacy	It is the ability to apply scientific knowledge and principles to understand the environment and test hypotheses.
	Digital Literacy	It is the ability to apply and create technology-based content, including finding and sharing information, answering questions, interacting with others and computer programming
	Financial Literacy	It is the ability to understand and apply the conceptual and financial aspects of daily activities.

[13] Richard Kern, *Literacy and Language Teaching* (New York: Oxford University Press, 2000).
[14] The World Economic Forum, "Appendices - New Vision for Education," accessed May 12, 2020, http://widgets.weforum.org/nve-2015/appendices.html.
[15] The World Economic Forum, "Appendices - New Vision for Education."

	SKILLS	DEFINITION
	Cultural Literacy and Citizenship	It is the ability to understand, appreciate, analyze, and apply knowledge of the culture and civic.
COMPETENCE	Critical thinking/ Solution to Problem	It is the ability to identify, analyze and evaluate situations, ideas, and information to convey responses and solutions
	Creativity	It is the ability to imagine and design innovative new ways to solve problems, answer questions or express meaning through application, synthesis or adapt to the diverse objectives of acquiring knowledge
	Communication	It is the ability to listen, understand, convey, and contextualize information verbally, nonverbally, visually, and in writing
	Collaboration	It is the ability to work in teams to achieve common goals, including the ability to prevent and manage conflict

Students need the 21st-century skills above because the literacy foundation consists of literacy, numeracy, scientific literacy, digital literacy, financial literacy, and cultural and citizenship literacy. These skills will improve students' competence in higher-level thinking, such as critical thinking or problem-solving, creativity, communication, and collaboration. The results of Guzel's research stated that numeracy literacy skills increase student confidence.[16] This research supports the statement that 21st-century skills become student's needs in the 4.0 Industrial Revolution era.

Basic Concepts of Higher-Order Thinking Skills

High Order Thinking Skills (HOTS) is the process of thinking students at a higher level of knowledge than various cognitive concepts. HOTS is not aments to analyze, synthesize, evaluate, and create. Alice Thomas and Glenda define that HOTS is an achievement of the ability to think towards higher-level thinking whose thinking is more

[16] Çiğdem İş Güzel and Giray Berberoğlu, "Students' Affective Characteristics and Their Relation to Mathematical Literacy Measures in the Programme for International Student Assessment (PISA) 2003.," *Eurasian Journal of Educational Research (EJER)*, no. 40 (2010)., https://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=1302597X&AN=69646298&h=j3mpD4X0TxDsJZOLzRzaJHyxZR1SgRPFKlP%2f1T48ScYd6nRsswC63lnCC65xqeIyw8HyPsONnllQ4TcJEQDg8Q%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d1302597X%26AN%3d69646298.

than just a repetition of facts.[17] Newman and Wehlage also support Thomas and Glenda's statement. Newman and Wehlage state that with HOTS, students will be able to distinguish ideas clearly, argue well, be able to solve problems, be able to construct explanations, be prepared to hypothesize, and understand complex matters more clearly.[18] HOTS occurs when students associate new information with information stored in memory and then associate and develop knowledge to solve problems.

Pohl stated that the rationale of the High Order Thinking Skill was Bloom's Taxonomy. Table 2 shows the Pohl statement.

Table 2
Bloom's Taxonomy[19]

Bloom's Cognitive Taxonomy Original (1956)	**Bloom's Revised Taxonomy Anderson & Krathwohl (2001)**	**Information**
Knowledge Comprehension Application	Remember Understand Apply	Lower Order Thinking Skills
Analysis Synthesis Evaluation	Analyze Evaluate Create	Higher-Order Thinking Skills

In Table 2, Bloom divides the cognitive domain into six levels of thinking, namely, (1) knowledge or recalling information that has been learned, (2) comprehension or understanding the meaning of the material, (3) application, using prior knowledge in new situations and situations or apply rules or principles, (4) analysis, identifying and understanding parts of the material or the whole material, (5) synthesis, combining elements to form a new whole, and (6) evaluation, checking or assess carefully based on several criteria.

Bloom's revised taxonomy conducted by Anderson and Krathwohl focuses more on how the cognitive domain is more lively and applicable to educators and learning

[17] Alice Thomas and Glenda Thorne, "How to Increase Higher Order Thinking," *Metarie, LA: Center for Development and Learning.(Accessed on 6 March 2019)*, 2009., https://www.semanticscholar.org/paper/How-to-Increase-Higher-Order-Thinking-Thomas Thorne/e1ac293c0dd2aeb6f1d61ed17fde3547cd483bcc.

[18] Fred M. Newmann and Gary G. Wehlage, "Successful School Restructuring: A Report to the Public and Educators," 1995, https://eric.ed.gov/?id=ED387925.

[19] Aleksander Pohl, "Classifying the Wikipedia Articles into the OpenCyc Taxonomy.," in *WoLE@ ISWC*, 2012, 5–16., https://www.researchgate.net/profile/Aleksander-Smywinski-Pohl/publication/268217131_Classifying_the_Wikipedia_Articles_into_the_OpenCyc_Taxonomy/links/54652f850cf25b85d17d2731/Classifying-the-Wikipedia-Articles-into-the-OpenCyc-Taxonomy.pdf.

practices that are expected to help educators in processing and formulating learning goals and efficient assessment strategies.[20] The three concepts above are the basis of Higher-Order Thinking Skills in the activity of analyzing, evaluating, creating knowledge following conceptual, procedural, and metacognitive.

Kurniati stated that to know one's high-level thinking skills, indicators were needed to measure these abilities.[21] Krathwohl in A Revision of Bloom's Taxonomy: an overview - theory into practice states that indicators for measuring higher-order thinking skills include:[22] first is analyze level. The indicators of analysis level are: (1) analyzing incoming information and structuring information into smaller sections to identify patterns of relationship, (2) able to recognize and distinguish the causes and effects of a complex scenario, (3) identifying/formulating questions. Second is evaluate level. The indicators of analysis level are: (1) provide an assessment of solutions, ideas, and methodologies using suitable criteria or existing standards to ascertain the value of their effectiveness or benefits; (2) making hypotheses, criticizing, and testing; (3) accept or reject a statement based on predetermined criteria. Meanwhile, the third is creating's level. The indicators of creating's level are: (1) generalize an idea or perspective on something; (2) designing a way to solve the problem; and (3) organizing elements or parts into new structures like never before.

Literacy Skills Improve High Order Thinking Skills in Elementary School Students

Literacy activities are central to the development of activities that are integrated into learning. Literacy activities are developed by improving literacy skills of subjects by using enrichment books and reading strategies in all subjects with stages: habituation, development, and learning.[23] Reading activity 15 minutes before the lesson begins is the habituation phase. The development phase can be carried out by providing a variety of reading experiences, reading and writing activities, and reading fiction and nonfiction

[20] Dinni, "HOTS (High Order Thinking Skills) dan Kaitannya dengan Kemampuan Literasi Matematika."

[21] Dian Kurniati, Romi Harimukti, and Nur Asiyah Jamil, "Kemampuan Berpikir Tingkat Tinggi Siswa SMP Di Kabupaten Jember Dalam Menyelesaikan Soal Berstandar PISA," *Jurnal Penelitian Dan Evaluasi Pendidikan* 20, no. 2 (2016): 142–55., https://journal.uny.ac.id/index.php/jpep/article/view/8058.

[22] David R. Krathwohl, "A Revision of Bloom's Taxonomy: An Overview," *Theory into Practice* 41, no. 4 (2002): 212–18., https://doi.org/10.1207/s15430421tip4104_2.

[23] Kisyani-Laksono et al., *Desain Induk Gerakan Literasi Sekolah*.

enrichment books. The next stage is carrying out integrated literacy activities by adjusting themes and subjects. The step is, namely, the learning phase.[24]

Students learn more by themselves and develop students' creativity in solving problems. The higher the involvement of students, the more meaningful student learning experiences. The habit of reading culture fosters students 'curiosity so that it raises issues that must be solved, thus requiring students to have high-level thinking skills as well. The main aim of this literacy activity is to foster and lead the student to higher-order thinking skills through students' critical thinking skills.[25]

Literacy culture activities have a positive impact on learning.[26] Teachers have to have good delivery skills to form the character of students who are skilled and think critically that ultimately learning is based on Higher Order Thinking Skills (HOTS).[27] HOTS based learning requires students to be active in learning, so the teacher is only a facilitator; the teacher bridges students when students find difficulties in solving problems they encounter.[28]

Three strategies to foster a literacy culture that have an impact on high-level thinking processes for students in elementary schools are;[29] the first strategy is condition literacy-friendly physical environment. The designing of the physical environment at school so as very friendly and conducive such as displaying students 'work, there is a reading room in every corner of the classroom and in the corner of the room, it will increase students' enthusiasm for reading which ultimately will make student implement in their lives.

The second strategy is the promotion of the social and affective environment as a literal model of communication and interaction. The communication and interaction model of all school components is a method to build the social and affective environment. The awarding can be done during the flag ceremony every week to appreciate the progress of students in all aspects. Achievements are valued not only academically, but also

[24] Kisyani-Laksono et al.
[25] Kisyani-Laksono et al.
[26] Cahyana, Kadir, and Gherardini, "Relasi Kemampuan Berpikir Kritis Dalam Kemampuan Literasi Sains Pada Siswa Kelas IV Sekolah Dasar."
[27] Yoki Ariyana et al., *Buku Pegangan Pembelajaran Berorientasi Pada Keterampilan Berpikir Tingkat Tinggi*.
[28] Yoki Ariyana et al.
[29] Carol S. Beers, James W. Beers, and Jeffrey O. Smith, *A Principal's Guide to Literacy Instruction* (New York: Guilford Press, 2009).

students' attitudes and efforts. Thus, every student has the opportunity to get a school award.

The third strategy is the promotion of the school as a literate academic environment. The physical, social, and affective environment is closely related to the educational environment. The planning and implementation of the literacy movement in schools can show this environment. Schools should provide a considerable amount of time for learning literacy. One of them is by carrying out activities to read silently, and or the teacher reads the book aloud for 15 minutes before the lesson.

The literate school ecosystem has the following characteristics are:[30] the first characteristic is fun and child-friendly, thus increasing the enthusiasm of its citizens in learning. The second characteristic is all citizens show empathy, care, and respect for others. The third is to foster a spirit of curiosity and a love of knowledge. The fourth is to enable citizens to be able to communicate and be able to contribute to their social environment. The fifth is to accommodate the participation of all citizens and the school's external environment.

A literate elementary ecosystem is a condition that instills the foundations of character, attitude, social empathy behavior, and love of knowledge. The development of technology and media requires strengthening the character and literacy abilities of students integrated, focusing on aspects of creativity, communication skills, critical thinking skills, and one important thing is the ability to use media safely, as described in Table 3 below.

Table 3
Literacy Skill of Elementary Students[31]

Level	Communication	Critical Thinking	Media Safety
SD/SDLB low class	Articulate empathy for a story character	Separate facts and fiction	Able to use technology with assistance/ assistance adults

[30] Kisyani-Laksono et al., *Desain Induk Gerakan Literasi Sekolah*.

[31] Chris M. Worsnop, Media Literacy through Critical Thinking: Teacher Materials (Seattle, WA: The NW Center for Excellence in Media Literacy, the College of Education at the University of Washington, 2004), http://depts.washington.edu/nwmedia/sections/nw_center/curriculum_docs/teach_combine.pdf.

Finally, the conclusion for this discussion is to build a literacy culture can improve students' critical thinking and ultimately refer to Higher-Order Thinking Skills (HOTS) based learning. In contrast, critical thinking skills based on Higher-Order Thinking Skills (HOTS) can improve reading culture in students.

CONCLUSION

The result of this research show literacy is the ability to interpret information critically in the fields of literacy, numeracy, science, digital, finance, culture, and citizenship. It can convey this knowledge well to others as a social relations practice to improve critical thinking/ problem-solving competencies, creativity, communication, and collaboration. Higher-Order Thinking Skills (HOTS) is the process of thinking students at a higher level of knowledge than various cognitive concepts in the form of analysis, synthesis, and evaluation. Literacy activities foster students' curiosity so that it raises problems that must be solved and require students to have Higher-Order Thinking Skills. School strategies to promote literacy culture involve conditioning of literacy-friendly physical environments, the seeking of social and affective environments as literate models of communication and interaction, and the striving from schools as literate academic environments. Fostering of literacy culture has an impact on students' high-level thinking processes.

The next research agenda on literacy skills and HOTS can focus on quantitative and qualitative testing of the impact of literacy skills on HOTS in the field. Besides, research on literacy skills and HOTS in various levels, from basic education to higher education in large populations, is an exciting research plan for the future.

REFERENCES

Ahmadi, Farid, and Hamidulloh Ibda. *Media Literasi Sekolah: Teori Dan Praktik*. Semarang: CV. Pilar Nusantara, 2018.

Beers, Carol S., James W. Beers, and Jeffrey O. Smith. *A Principal's Guide to Literacy Instruction*. New York: Guilford Press, 2009.

Cahyana, Ucu, Abdul Kadir, and Monalisa Gherardini. "Relasi Kemampuan Berpikir Kritis Dalam Kemampuan Literasi Sains Pada Siswa Kelas IV Sekolah Dasar." *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan* 26, no. 1 (May 12, 2017): 14–22. https://doi.org/10.17977/um009v26i12017p014.

Dinni, Husna Nur. "HOTS (High Order Thinking Skills) dan Kaitannya dengan Kemampuan Literasi Matematika." *PRISMA, Prosiding Seminar Nasional*

Matematika 1 (2018): 170–76, https://journal.unnes.ac.id/sju/index.php/prisma/article/view/19597.

Güzel, Çiğdem İş, and Giray Berberoğlu. "Students' Affective Characteristics and Their Relation to Mathematical Literacy Measures in the Programme for International Student Assessment (PISA) 2003." *Eurasian Journal of Educational Research (EJER)*, no. 40 (2010), https://web.b.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=1302597X&AN=69646298&h=j3mpD4X0TxDsJZOLzRzaJHyxZR1SgRPFKlP%2f1T48ScYd6nRsswC63lnCC65xqeIyw8HyPsONnllQ4TcJEQDg8Q%3d%3d&crl=c&resultNs=AdminWebAuth&resultLocal=ErrCrlNotAuth&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d1302597X%26AN%3d69646298.

Kern, Richard. *Literacy and Language Teaching*. New York: Oxford University Press, 2000.

Kisyani-Laksono, Pratiwi Retnaningdyah, Ph.D., Sofie Dewayani, Ph.D., Wien Muldian, S.S., Dr. Susanti Sufyadi, Dwi Renya Roosaria, S.H., Dr. Dewi Utama Faizah, et al. *Desain Induk Gerakan Literasi Sekolah*. 2nd ed. Jakarta: Direktorat Jenderal Pendidikan Dasar dan Menengah Kementerian Pendidikan dan Kebudayaan, 2018.

Krathwohl, David R. "A Revision of Bloom's Taxonomy: An Overview." *Theory into Practice* 41, no. 4 (2002): 212–18, https://www.researchgate.net/profile/Aleksander-Smywinski-Pohl/publication/268217131_Classifying_the_Wikipedia_Articles_into_the_OpenCyc_Taxonomy/links/54652f850cf25b85d17d2731/Classifying-the-Wikipedia-Articles-into-the-OpenCyc-Taxonomy.pdf.

Kurniati, Dian, Romi Harimukti, and Nur Asiyah Jamil. "Kemampuan Berpikir Tingkat Tinggi Siswa SMP Di Kabupaten Jember Dalam Menyelesaikan Soal Berstandar PISA." *Jurnal Penelitian Dan Evaluasi Pendidikan* 20, no. 2 (2016): 142–55, https://journal.uny.ac.id/index.php/jpep/article/view/8058.

Media and Information Literacy Clearinghouse. "The Alexandria Proclamation on Information Literacy and Lifelong Learning (2005)," October 25, 2011. https://milunesco.unaoc.org/mil-resources/the-alexandria-proclamation-on-information-literacy-and-lifelong-learning-2005/.

Media, Kompas Cyber. "Mendikbud Imbau Guru Kembangkan Pembelajaran HOTS." KOMPAS.com, November 12, 2018. https://edukasi.kompas.com/read/2018/11/12/21323171/mendikbud-imbau-guru-kembangkan-pembelajaran-hots.

Newmann, Fred M., and Gary G. Wehlage. "Successful School Restructuring: A Report to the Public and Educators," 1995. https://eric.ed.gov/?id=ED387925.

OECD. *PISA 2018 Results Combined Executive Summaries Volume I, II, & IIII*. Paris, Perancis: OECD Publishing, 2019.

Pohl, Aleksander. "Classifying the Wikipedia Articles into the OpenCyc Taxonomy." In *WoLE@ ISWC*, 5–16, 2012, https://www.researchgate.net/profile/Aleksander-Smywinski-

Pohl/publication/268217131_Classifying_the_Wikipedia_Articles_into_the_OpenCyc_Taxonomy/links/54652f850cf25b85d17d2731/Classifying-the-Wikipedia-Articles-into-the-OpenCyc-Taxonomy.pdf.

Susiati, A, and M Miarsyah. "Hubungan Kemampuan Membaca Pemahaman Dan Kemampuan Berpikir Tingkat Tinggi Dengan Kemampuan Literasi Sains Guru Biologi." *Biosfer: Jurnal Pendidikan Biologi* 11, no. 1 (2018): 1–12.

The Partisipants of The Information Literacy Meeting of Experts. "The Prague Declaration 'Towards An Information Literate Society.'" UNESCO, 2003. http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/PragueDeclaration.pdf.

The World Economic Forum, "Appendices - New Vision for Education." Accessed May 12, 2020. http://widgets.weforum.org/nve-2015/appendices.html.

Thomas, Alice, and Glenda Thorne. "How to Increase Higher Order Thinking." *Metarie, LA: Center for Development and Learning.(Accessed on 6 March 2019)*, 2009,https://www.semanticscholar.org/paper/How-to-Increase-Higher-Order-Thinking-Thomas-Thorne/e1ac293c0dd2aeb6f1d61ed17fde3547cd483bcc.

Worsnop, Chris M. Media Literacy through Critical Thinking: Teacher Materials. Seattle, WA: The NW Center for Excellence in Media Literacy, the College of Education at the University of Washington, 2004. http://depts.washington.edu/nwmedia/sections/nw_center/curriculum_docs/teach_combine.pdf

Yoki Ariyana, Ari Pudjiastuti, Reisky Bestary, and Zamroni. *Buku Pegangan Pembelajaran Berorientasi Pada Keterampilan Berpikir Tingkat Tinggi*. Jakarta: Direktorat Jenderal Guru dan Tenaga Kependidikan Kementerian Pendidikan dan Kebudayaan, 2018.