THE CORRELATION BETWEEN STUDENTS' PERCEPTIONS AND THEIR LEVELS OF HIGHER ORDER THINKING SKILLS AT SMAN 1 PALEMBANG

A Thesis by

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FACULTY OF TEACHER TRAINING AND EDUCATION UNIVERSITY OF SRIWIJAYA PALEMBANG

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DECLARATION

I, the undersign,

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Certify that thesis untitled "The Correlation between Students' Perceptions and Their Levels of Higher Order Thinking Skills at SMAN 1 Palembang" is based on my thinking results and I did not do any plagiarism or inappropriate quotation againsts the ethic and rules commended by the Ministry of Education of Republic Indonesia Number 17, 2010 regarding plagiarism in higher education. Therefore, I deserve to face the court if I am found to have plagiarized this academic assessment.

Palembang, January 29th, 2021

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DEDICATION

This thesis is dedicated with all of my sweat and tears to my Mama, Papa, and Embom. Thank you for all of your pray, love, and supports through the ups and downs during my campus life. I am more than blessed to grow stronger day by day.

ΜΟΤΤΟ

Be motivated and helpful.

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CHAPTER I

INTRODUCTION

This chapter introduces (1) the background of study, (2) the problems of study, (3) the objectives of study, (4) the significance of study, and (5) the hypotheses of study.

1.1 The Background of Study

To face 21st century changes and challenges, included in teaching and learning activities, all elements are required to have open mindset and be able to see things from some points of view. In learning English, it is actually about not only mastering procedural knowledge such as structure of a sentence and way to deliver the idea, but also understanding the culture and technology development from around the world, which are linked through understanding the language. During the learning process, students need to integrate one ability and another, such as writing with reading or listening with speaking in order to understand and practice English well into their daily activities. According to this, Scott (2017) mentions that categories of 21st century skills are learning skills (4Cs; critical thinking, creativity, collaboration, and communication skills), life skills (FLIPSs; flexibility, leadership, initiative, productivity, and social skills), and literacy skills (IMTs; Information, Media, and Technology skills). As the part of needed 21st century skills, learning skills play important role in the process. The first ability of 21st century skills is all about problem solving techniques. The second ability is about generating new ideas and innovations. The third ability is about conducting teamwork to achieve predetermined goals. The fourth ability is about creating a good way to deliver ideas (Applied Educational Systems, 2019).

Meanwhile, higher order thinking skills (HOTS) concept is a discussion that continues to be developed until now, but Benjamin Samuel Bloom was the first person who conducted the root of HOTS concept. Bloom (1964) in his research classified the hierarchy in his taxonomy into three domains namely cognitive, affective, and psychomotor domains. In addition to the first taxonomy with its three domains, the cognitive domain is the most demanding focus on the discussion. Anderson, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock (2001) revised the cognitive domain from Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation into Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. Then, Brookhart (2010) classified the definitions of higher order thinking into three main categories: higher order thinking in terms of (1) transferring, (2) critical thinking, and (3) problem solving. Recently, the hierarchy of cognitive domain is classified into two: lower and higher orderthinking skills. Remembering, Understanding, and Applying are included in lower order-thinking skills (LOTS), while Analyzing, Evaluating, and Creating are included in higher order-thinking skills (Arase, Kamarudin, & Hassan, 2016). This term has been adapted to alter curricula around the world along with each learning objectives. HOTS are usually associated with 21st century skills that required students to think critically to solve their problems (Setyarini, Muslim, Rukmini, Yuliasri, & Mujianto, 2018).

In educational aspect, HOTS concept and 21st century skills cannot be separated since they are becoming one of modern issues around the world. They are usually associated with 21st century skills because students are required to think critically to solve their problems combining some abilities (Setyarini, Muslim, Rukmini, Yuliasri, & Mujianto, 2018). The skills in learning English are aimed to help students become an open-minded individual with qualified thinking skill as reflection of the language mastery process. King, Goodson, and Rohani (2012) also support this statement, HOTS are based on LOTS such as categorizing, relating students' prior knowledge of the learning objectives, and integrating simple application. Each learning with influenced input is expected to give desired output. In order to conduct a harmonized learning process, there must be a dynamic interaction among teachers as facilitator and students as the concerns. Attractive teaching strategies and supportive learning environments influence student's

perversity, self-monitoring, and flexible behavior as do the growth of HOTS (Setyarini & Ling, 2019).

The integration of 21st century skills and HOTS is expected to be implemented in every learning process where teachers as facilitator and creator of creative learning activity, and students as active and critical participants. This is of course different from the prior learning process where generally each subject is taught with different approaches and each type of learning content is taught separately (Mulyasa, 2015). Nowadays, learning process is directed to make students able to survive and understand how to implement the skills of collaborative work in the rapid development of technologies with recent developed methods of learning conscious, sustainable, active, and creative in facing changes and challenges in this digital era. Refers to Ministry of Education and Culture of Republic Indonesia Regulation No. 36 year 2018 in Basic Framework and Curriculum Structure of Senior High School/Madrasah Aliyah in the Introduction in the Objective section of 2013 Revised Curriculum. "Kurikulum 2013 bertujuan untuk mempersiapkan manusia Indonesia agar memiliki kemampuan hidup sebagai pribadi dan warga negara yang beriman, produktif, kreatif, inovatif, dan afektif serta mampu berkontribusi pada kehidupan bermasyarakat, berbangsa, bernegara, dan peradaban dunia. ((2013 Curriculum aims to prepare Indonesian people to have the abilities to live as individuals and faithful, productive, creative, innovative, and affective citizens also be able to contribute to the life of society, nation, state, and world civilization))" (Kementrian Pendidikan dan Kebudayaan [Kemendikbud], 2018, p.3). The learning process that is expected to associate HOTS and 21st century skills requires strong synergy among all education practitioners, starting from the curriculum to the components below it.

To improve the required skills, Ministry of Education and Culture of Republic Indonesia formulated a new curriculum, which is expected to keep up with the time changes. The formulated curriculum is 2013 Revised Curriculum or mostly abbreviated as Kurtilas. In its implementation, since the policy of using 2013 Revised Curriculum for all schools was made until now, this curriculum has gone through some revisions considering educational and socio-economic reasons (Wiguna, 2018). This curriculum is a tool in achieving national education goals and guidelines for implementing education itself. National education goals as stated in Basic Competency in Model Silabus SMA/MA/ SMK/MAK: Bahasa Inggris, indicates that students are expected to be able to integrate one competence with the other competence in relation to improve pedagogical process (Kemendikbud, 2017, p.5). In line with this, Mkrttchian and Belyanina (as cited in IGI Global, 2018) mention that pedagogical process is promoting dynamic interaction between teachers and students to achieve learning objectives and guiding to the problem solving within changes and challenges (i.e. the alteration of their qualities, behavioral and personal improvement). These goals are designed to make Indonesian students aware of the importance of mastering 21st century skills.

Unfortunately, some teachers and students lack of understanding HOTS concept and spirit of the curriculum currently used. The writer considered doing the study to secondary school students, especially in senior high school. Students in senior high school are mostly in the phase of mid-adolescence, where students' cognitive developments continue to increase. They are being able to set their targets and become interested in things that are more rational and related to the meaning of life. The writer chose SMAN 1 Palembang since they are using 2013 Revised Curriculum and known as one of the A-accredited schools. This school is expected to apply the concept of HOTS in every teaching and learning processes better than ordinary schools, so that the school prepare their students to compete globally in the future. Accordingly, Mulyana, Hidayat, and Sholih (2013) state that students will have the desire to achieve well in a lesson if they have good perceptions. Otherwise, Sukmawati, Haris, and Mustari (2019) state that each student has different point of view according to the level of knowledge and understanding of the object being perceived.

At first glance, perceptions appear to be able to affect student's performance in mastering a subject and their ability to work on questions being assessed. This was also stated by Husodo, Dyah, and Susantiningrum (2019) that there was a significant positive effect on students' perceptions of learning strategies and their peer groups toward students' HOTS. This correlation exists because students who got the highest scores could perceive the learning strategies used by the teacher positively and take the advantage of peer groups, which have a positive impact on students' thinking abilities so that they can increase their HOTS. Therefore, the writer was very interested in exploring the correlation between students' perceptions and their levels if given HOTS nuanced questions. Moreover, study on HOTS has not plentifully been done at University of Sriwijaya and hopefully this study can lead future deeper studies.

1.2 The Problems of Study

The problems of the study are formulated into the following questions:

- What are the students' perceptions of higher order thinking skills in learning English at SMAN 1 Palembang?
- 2) How are the students' levels of higher order thinking skills in answering questions at SMAN 1 Palembang?
- 3) Is there any significant correlation between the students' perceptions and their levels of higher order thinking skills at SMAN 1 Palembang?

1.3 The Objectives of Study

Based on the problems above, the objectives of the study are:

- To find out the students' perceptions of higher order thinking skills in learning English at SMAN 1 Palembang.
- 2) To find out the students' levels of higher order thinking skills in answering questions at SMAN 1 Palembang.
- To find out the significant correlation between the students' perceptions and their levels of higher order thinking skills at SMAN 1 Palembang.

1.4 The Significances of Study

This study is expected to be beneficial for the students, teachers of English subject, and SMAN 1 Palembang. For the students, it could help them realize the importance of critical thinking so that they are ready to prepare themselves into global competition in 21st century era. For the teachers, it could help them in varying the teaching style and strategies to improve students' abilities in applying higher order thinking skills in learning English. For the school, it would help to understand better the students' abilities so that the school can provide learning assistance and HOTS supporting facilities in learning English.

1.5 The Hypotheses of Study

H₀: There is no significant correlation between Students of SMAN 1 Palembang Perceptions and Their Levels of HOTS.

H₁: There is a significant correlation between Students of SMAN 1 Palembang Perceptions and Their Levels of HOTS.

The correlational score of the results would show whether or not there is a significant correlation between perception and level of HOTS, also test these hypotheses using some criteria. This research used significance level of 0.05 in two-tailed testing to determine obtained or probability value. H_0 is accepted if the probability value is lower than the critical value, hence H_1 is rejected. It can be concluded that there is no significant correlation between the two variables. Meanwhile the contrary might be happened, where the probability value is higher than the critical value, H_0 is rejected hence H_1 is accepted. It can be concluded that there is a significant correlation between the two variables.

REFERENCES

- Ahmad, N. A., Azizan, F. L., Rahim, N. F., Jaya, N. H., Shaipullah, N. M., & Siaw, E. S. (2017). Relationship between students' perceptions toward the teaching and learning methods of Mathematics' lecturer and their achievement in pre-university studies. *International Education Studies*, 10(11). 129-134. doi: 10.5539/ies.v10n11p129.
- Akatsuka, Y. (2019). Awareness of critical thinking attitudes and English speaking skills: The effects of questions involving higher-order thinking. *Journal of Pan-Pacific Association of Applied Linguistics*, 23(2), 59-84. doi: 10.25256/ PAAL.23.2.4.
- Akhtar, M. I. (2016). *Research in social science: Interdisciplinary perspectives*. Retrieved from https://ssrn.com/abstract= 2862445.
- American Academy of Child and Adolescent Psychiatry. (2008). *Facts for families*. Retrieved from https://www.aacap.org/AACAP/Families_and_Youth/Facts _for_Families/Layout/FFF_Guide-01.aspx.
- Anderson, L. W., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (Ed.). (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives (Comp. ed.). New York, NY: Longman.
- Ansari, K. (2018). Penilaian pembelajaran sastra Indonesia berketerampilan pikir taraf tinggi (HOTS). *Prosiding Seminar Nasional Pendidikan Bahasa dan Sastra Indonesia I Unimed 1*(1), 21-34. FBS Unimed Press.
- Applied Educational Systems. (2019). What are the 4c's of 21st century skills?. Retrieved from https://www.aeseducation.com/career-readiness/what-are-the-4-cs-of-21st-century-skills.
- Arase, A., Kamarudin, N., & Hassan, A. (2016). The development of students' capabilities in higher order thinking skill (HOTS) through science education. Jurnal Pemikir Pendidikan, 7(1), 1-18.
- Ardina, I. (2018). *Apa itu higher order thinking skills (HOTS)*. Retrieved from https://google.com/amp/s/beritagar.id/artikel-amp/gaya-hidup/apa-itu-high er-order-thinking-skills-hots.
- Arifin, Z. (2016). Evaluasi Pembelajaran. Bandung: PT Remaja Rosdakarya.
- Badan Standar Nasional Pendidikan. (2010). *Laporan BSNP tahun 2010*. Jakarta: Badan Standar Nasional Pendidikan.

- Barahal, S. L. (2008). Thinking about thinking: Pre-service teachers strengthen their thinking artfully. *Phi Delta Kappan*, 90(4), 298-302.
- Bloom, B. S. (Ed.). (1964). *Taxonomy of educational objectives*. New York, NY: David McKay Company.
- Brookhart, S. M. (2010). *How to assess higher order thinking skills in your classroom* [e-book]. Retrieved from http://www.ascd.org/Publications/ Books/Overview/How-to-Assess-Higher-Order-Thinking-Skills-in-Your-Classroom.aspx.
- Budiaji, W. (2013). Skala pengukuran dan jumlah respon skala likert. *Jurnal Ilmu Pertanian dan Perikanan*, 2(2), 127-133.
- Chan, L. L., & Idris, N. (2017). Validity and reliability of the instrument using exploratory factor analysis and Cronbach's alpha. *International Journal of Academic Research in Business and Social Sciences*, 7(10), 400-410. doi: 10.6007/IJARBSS/v7-i10/3387.
- Check, J. W., & Schutt, R. K. (2012). *Research methods in education*. London: SAGE Publisher.
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education*. London: Routledge.
- Collins, A. (2014). Neuroscience, music education and the pre-service primary (elementary) generalist teacher. *International Journal of Education & the Arts*, *15*(5), 9-14.
- Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Boston, MA: Pearson Education.
- Danim, S. (2010). Perkembangan peserta didik. Bandung: CV Alfabeta.
- Das, K. R., & Imon, A. H. M. R. (2016). A brief review of tests for normality. *American Journal of Theoretical and Applied Statistics*, 5(1), 5-12.
- Denzin, N. K., & Lincoln, Y. S. (2017). *The SAGE handbook of qualitative research* (5th ed.). London: SAGE Publisher.
- Heong, Y. M., Yunos, J. B., Noraini B.O., Suzanna, B. I., & Kiong, T. T. (2010). The perception of student on mastering the level of higher order thinking skills in technical education subjects. *RCEE & RHEd2010*, 7(6), 1-5.
- Hidayat, T. (2019). *Pembahasan studi kasus sebagai bagian metodologi penelitian*. Retrieved from https://www.researchgate.net/publication/335227300_PEM

BAHASAN_STUDI_KASUS_SEBAGAI_BAGIAN_METODOLOGI_PE NELITIAN.

- Hiew, W. (2012). English language teaching and learning issues in Malaysia: Learners' perceptions via Facebook dialogue journal. *Journal of Arts, Science & Commerce, 3*(1), 11.
- Hindun, L. (2012). Hubungan antara persepsi siswa mengenai variasi gaya mengajar guru dalam pembelajaran biologi dengan motivasi belajar siswa kelas X di MAN Kendal (Undergraduate's thesis, IAIN Walisongo, Semarang). Retrieved from eprints.walisongo.ac.id/443/3/083811014_ Bab2.pdf.
- Hornby, A. S. (Ed.). (2015). *Oxford advanced learner's dictionary* (9th ed.). Oxford, Oxfordshire: Oxford University Press.
- Husodo, K. T., Dyah, C., & Susantiningrum, S. (2019). Pengaruh persepsi siswa tentang strategi pembelajaran dan kelompok teman sebaya terhadap high order thinking skills siswa pada mata pelajaran administrasi sarana dan prasarana. Jurnal Informasi Dan Komunikasi Administrasi Perkantoran, 3(2), 78-86.
- IGI Global. (2018). *What is pedagogical process?*. Retrieved from https://www.igi-global.com/dictionary/professional-competence-of-teachers-and-adminis tration-of-general-education-institutions-for-teaching-student-with-disabi lity-as-a-technology/62049.
- Ilham, M. (2020). 14 pengertian siswa menurut para ahli. Retrieved from https://materibelajar.co.id/pengertian-siswa-menurut-para-ahli/.
- Kementrian Pendidikan dan Kebudayaan. (2013). *Modul pelatihan implementasi kurikulum 2013*. Jakarta: Badan Pengembangan Sumberdaya Manusia Pendidikan dan Kebudayaan.
- Kementrian Pendidikan dan Kebudayaan. (2017). *Model silabus SMA/MA/SMK/ MAK: Bahasa Inggris.* Jakarta: Author.
- Kementrian Pendidikan dan Kebudayaan. (2018). Peraturan menteri pendidikan dan kebuadyaan nomor 36 tahun 2018 tentang kerangka dasar dan struktur kurikulum SMA/MA. Jakarta: Author.
- King, F. J., Goodson, L., & Rohani, F. (2012). *High order thinking skills: Definition, teaching strategies, and assessment.* Florida, FL: Center for Advancement of Learning and Assessment.
- Komara, E. (2018). Penguatan pendidikan karakter dan pembelajaran abad 21. Southeast Asian Journal for Youth, Sports & Health Education, 4(1), 17-24. Bandung: Minda Masagi Press.

- Komisi Nasional Indonesia untuk UNESCO Kementrian Pendidikan dan Kebudayaan. (2019). *Education for Sustainable Development (ESD)* [Press release]. Retrieved from https://kniu.kemdikbud.go.id/?page_id =248.
- Krathwol, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, *41*(4), 212-218.
- Kurniati, D., Harimukti, R., & Jamil, N. A. (2016). Kemampuan berpikir tingkat tinggi siswa SMP di kabupaten Jember dalam menyelesaikan soal berstandar PISA. Jurnal Penelitian dan Evaluasi Pendidikan, 20(2), 142-155. doi: 10.21831/pep.v20i2.8058.
- Kusuma, M. D., Rosidin, U., Abdurrahman, A., & Suyatna, A. (2017). The development of higher order thinking skill (HOTS) instrument assessment in physics study. *IOSR Journal of Research & Method in Education*, 7(1), 26-32. doi: 10.9790/7388-0701052632.
- Likert, R. (1932). A technique for the measurement of attitudes. Archives of *Psychology*, 22(140), 1-55.
- Marr, B. (2018). *What is industry 4.0? Here's a super easy explanation for anyone*. Retrieved from https://www.forbes.com/sites/bernardmarr/2018/09/02/ what-is-industry-4-0-heres-a-super-easy-explanation-for-anyone/#cbf4598 9788a.
- Marsudi, A. S., & Widjaja, Y. (2019). Industri 4.0 dan dampaknya terhadap financial technology serta kesiapan tenaga kerja di Indonesia. *Ikraith Ekonomika*, 2(2), 1-3.
- McPeck, J. E. (2016). *Critical thinking and education*. Routledge. Retrieved from https://books.google.co.id/books?hl=id&lr=&id=E1IPDQAAQBAJ&oi=fn d&pg=PT8&dq=critical+thinking+in+education&ots=87nTq9zWQH&sig =ktCA7hRhX5DuHDAFyp765Xiz9QI&redir_esc=y#v=onepage&q=critic al%20thinking%20in%20education&f=false.
- Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice*, 24(1), 9-18.
- Mulyana, A., Hidayat, S., & Sholih, S. (2013). Hubungan antara persepsi, minat, dan sikap siswa dengan hasil belajar siswa dalam pembelajaran PKn. *Jurnal Pendidikan dan Kebudayaan*, 19(3), 315-330.
- Mulyasa, E. (2015). *Pengembangan dan implementasi kurikulum 2013*. Bandung: PT Remaja Rosdakarya.

- Munawwaroh, F., & Anindyta, F. A. (2020). Kemampuan dan persepsi mahasiswa pendidikan matematika dalam pemecahan soal HOTS. *Prosiding Sendika*, 6(2), 220-228.
- Najichun, M., & Winarso, W. (2016). Hubungan persepsi siswa tentang guru matematika dengan hasil belajar matematika siswa. *Jurnal Psikologi Undip*, *15*(2). 139-146.
- Nitko, A. (2011). *Educational assessment of students* (6th ed.). Boston, MA: Pearson Prentice Hall.
- Nofrion, N., & Wijayanto, B. (2018). Learning activities in higher order thinking skill (HOTS) oriented learning context. *GEOSFERA Indonesia*, 3(2), 122-130. doi: 10.19184/geosi.v3i2.8126.
- Nordstokke, D. W., Zumbo, B. D., Cairns, S. L., & Saklofske, D. H. (2011). The operating characteristics of the nonparametric Levene test for equal variances with assessment and evaluation data. *Practical Assessment, Research, and Evaluation*, *16*(1), 5.
- Nur, A. A., & Sumiarti, S. (2016). Metodologi penelitian. Bogor: IPB Press.
- Petrus, I. (2019). *Statistics in education course materials revised*. Palembang: NoerFikri Offset.
- Rahmat, M. (2012). Hubungan persepsi siswa tentang keterampilan mengajar guru dan motivasi berprestasi dengan hasil belajar siswa sekolah menengah kejuruan (Doctoral's dissertation, Universitas Pendidikan Indonesia). Retrieved from http://repository.upi.edu/10472/.
- Regoniel, P. A. (2012). *What are examples of variables in research?*. Retrieved from https://simplyeducate.me/2012/10/22/what-are-examples-of-variables -in-research/.
- Robbins, S. P. (2014). *Perilaku organisasi* (1st ed.). Jakarta: Salemba Empat.
- Rofalina, F. (2018). *Pembahasan lengkap seputar soal HOTS*. Retrieved from https://www.zenius.net/blog/20598/soal-hots.
- Sarudin, I., Noor, Z. M., Zubairi, A. M., Ahmad, T. B. T., & Nordin, M. S. (2013). Needs assessment of workplace English and Malaysian graduates' English language competency. *World Applied Sciences Journal*, 21(21), 88-94. doi: 10.5829/idosi.wasj.2013.21.sltl.2141.
- Scott, L. A. (2017). 21st century skills: Early learning framework. Retrieved from https://www.scribd.com/document/397241376/21st-Century-Skills-Early-Learning-Framework.

- Setyarini, S., Muslim, A. B., Rukmini, D., Yuliasri, I., & Mujianto, Y. (2018). Thinking critically while storytelling: Improving children's HOTS and English oral competence. *Indonesian Journal of Applied Linguistics*, 8(1), 189-197. doi: 10.17509/ijal.v8i1.11480.
- Setyarini, S., & Ling, M. A. (2019). Promoting higher order thinking skills in storytelling for teaching English to young adolescents in 21st century language. *International Seminar on Language, Education, and Culture, KnE Social Science*, 17(3), 155-164. doi: 10.18502/kss.v3i10.3897.
- Siregar, S. (2014). *Metode penelitian kuantitatif dilengkapi dengan perbandingan perhitungan manual & SPSS* (2nd ed.). Jakarta: Kencana.
- Slameto, B. (2010). *Belajar dan faktor-faktor yang mempengaruhinya*. Jakarta: Rineka Cipta.
- Staff Squared HR. (2015). *The Difference between Knowledge, Skills and Abilities*. Retrieved from https://www.staffsquared.com/blog/the-difference-between -knowledge-skills-and-abilities/.
- Sugiyono. S. (2011). *Metode penelitian kuantitatif kualitatif dan R&D* (3rd ed.). Bandung: Alfabeta.
- Sukmawati, A., Haris, H., & Mustari, M. (2019). Persepsi guru terhadap penilaian higher order thinking skills (hots). Jurnal Pemikiran dan Penelitian Ilmuilmu Sosial, Hukum, & Pengajarannya, 14(2), 157-169.
- Suwartono, T. (2014). *Dasar-dasar metodologi penelitian*. Yogyakarta: CV Andi Offset.
- Suyanto, S. (2018). The implementation of the scientific approach through 5ms of the new curriculum of 2013 in Indonesia. *Cakrawala Pendidikan*, *37*(1), 22-29.
- Trigueros, R., Juan, M., Francisco, S. (2017). *Qualitative and quantitative research instruments: Research tools* [e-book]. Retrieved from https://www.research gate.net/publication/323014697.
- UK Essays. (2018). *Definition of test types of test education essay*. Retrieved from https://www.ukessays.com/essays/education/definition-of-test-types-of-test -education-essay.php?vref=1.
- Tang, Q. (2015). Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. In UNESCO, *Education 2030*. Proceedings of the World Education Forum for the Incheon Declaration and Framework for Action (pp. 1-83). Incheon, South Korea.

- Widana, I, W. (2016). *Penulisan soal HOTS untuk ujian sekolah*. Jakarta: Direktorat Pembinaan SMA.
- Widana, I, W. (2017). Higher order thinking skills (HOTS) assessment. *Journal of Indonesian Students Assessment and Evaluation*, *3*(1), 1-13.
- Wiersma, W. (2000). *Research methods in education: An introduction* (7th ed.) Boston, MA: Allyn & Bacon.
- Wiguna, J. (2018). Seperti apa dan bagaimana penerapan kurikulum 2013 revisi?. Retrieved from https://www.quipper.com/id/blog/tips-trick/penerapan-kuri kulum-2013-revisi/.
- Winarno, M. E. (2014). Evaluasi hasil pendidikan jasmani, olahraga, dan kesehatan. Malang: Universitas Negeri Malang.
- Woolf, B. P., Lane, H. C., Chaudhri, V. K., & Kolodner, J. L. (2013, December). AI grand challenges for education. *AI Magazine*, *34*(4), 66-84.
- Wulan, A., R. (2007). Pengertian dan esensi konsep evaluasi, asesmen, tes, dan pengukuran. Jurnal FPMIPA Universitas Pendidikan Indonesia, 32(3), 1-10.
- Yuliati, S. R., & Lestari, I. (2018). Higher-order thinking skills (HOTS) analysis of students in solving HOTS question in higher education. *Perspektif Ilmu Pendidikan*, 32(2), 181-188. doi: 10.21009/pip.322.10.
- Yusuf, I. A. (2011). *Memahami focus group discussion (FGD)*. Retrieved from hhtps://bincangmedia.wordpress.com/2011/03/28/.
- Zaim, M. (2017). Implementing scientific approach to teach English at senior high school in Indonesia. Asian Social Science, 13(2), 33-40. doi: 10.5539/ass.v13n2p33.
- Zamzania, A. W. H. & Aristia, R. (2018). Jenis-jenis instrumen dalam evaluasi pembelajaran. UMSIDA EPrints, 3(1), 5-13.
- Zohrabi, M. (2013). Mixed method research: Instruments, validity, reliability, and reporting findings. *Theory and Practice in Language Studies*, *3*(2), 254-262. doi:10.4304/tpls.3.2.254-262.