AN EFL TEACHER'S METACOGNITIVE REGULATION IN DESIGNING HIGHER ORDER THINKING SKILLS-BASED QUESTIONS

A THESIS

submitted in partial fulfillment of the requirements for the Master's Degree in English Education

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I at this moment certify that this thesis entitled **"An EFL Teacher's Metacognitive Regulation in Designing Higher Order Thinking Skills-Based Questions"** is entirely my original written work. In this thesis, I am fully aware that I have quoted some statements and ideas from other sources, and they are stated and appropriately acknowledged in this paper.

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PREFACE

In the name of Allah SWT, the Most Gracious and the Most Merciful, so this thesis entitled **"An EFL Teacher's Metacognitive Regulation in Designing Higher Order Thinking Skills-Based Questions"** has been accomplished as a requirement for obtaining a Master's Degree in English Education Study Program of the Indonesia University of Education.

This thesis mainly focuses on metacognitive regulation, which becomes one of the strategies for promoting higher order thinking skills as the learning goals of the 2013 Curriculum. Due to the lack of knowledge, I admit that there are some weaknesses. Thus, constructive criticism and feedback are expected for the betterment of this paper.

Hopefully, this thesis will benefit readers, especially those interested in metacognitive regulation and higher order thinking skills.

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Abstract

Nowadays, Higher Order Thinking Skills (HOTs) in English Foreign Language (EFL) have been promoted through several strategies relating to 21st Century development demands. However, the use of a metacognitive regulation strategy, which is beneficial for a teacher to plan, monitor, and evaluate the process of promoting HOTs is still rarely implemented. In light of this issue, this research examined an EFL teacher's metacognitive regulation in designing HOTs-based questions, particularly its implementation, challenges, and impacts. A qualitative case study was employed using observation, interview, and document analysis to collect the data. This research was carried out at one of the senior high schools in Bandung. One teacher and 25 tenth graders were selected as research participants. The result showed that the teacher implemented three metacognitive regulation types in designing HOTs-based questions. In detail, planning was found in the opening, monitoring was found in the main activity, and closing was found in the closing phase. However, the teacher faced a number of challenges in its implementation. They partly came from the school, teacher, students, and technical aspect. Then, the impacts of this strategy on the students cover several points, such as increasing students' understanding, improving students' attention, encouraging students' active involvement, and arousing students' interest.

Keywords: *higher order thinking skills (HOTs), metacognition, metacognitive regulation, teacher's questions.*

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Abdellah, R. (2015). Metacognitive awareness and its relation to academic achievement and teaching performance of pre-service female teachers in Ajman University in UAE. *Social and Behavioral Sciences*, 174, 560-567. https://doi.org/10.1016/j.sbspro.2015.01.707

Adams, J, D., & Mabusela, M, S. (2014). Metacognitive approach to teacher development: supporting national professional diploma in education (NPDE) students. *Mediterranean Journal of Social Sciences, 5*(15), 289-296. https://doi.org/10.5901/mjss.2014.v5n15p289

Afandi., Hidayat, S., & Syahri, I. (2019). Developing interactive questions to measure the higher order thinking skills of senior high schools' students. *JPBI. 5*(2), 313-324. https://doi.org/10.22219/jpbi.v5i2.7747

Ahmad, N, S., Abu, M, S., & Abdullah, A, H. (2017). Inculcating higher-order thinking skills in mathematics: why is it so hard? *Man in India, 97*(13), 51-62.

Ahmadi., & Kurniawan, E. (2020). Teachers' questions in Indonesian EFL classroom. *Journal of Linguistics, Literature & Language Teaching, 6*(1), 1-11. https://doi.org/10.32505/jl3t.v6i1.1355

Akman, O., & Alagoz, B. (2018). Relation between metacognitive awareness and participation to class discussion of university students. *Universal Journal of Educational Research, 6*(1), 11-24. https://doi.org/10.13189/ujer.2018.060102

Aliakbari, M., & Sadeghdaghighi, A. (2013). Teachers' perception of the barriers to critical thinking. *Social and Behavioral Sciences*, 70, 1-15. https://doi.org/10.1016/j.sbspro.2013.01.031

Al-khresheh, M, H., Khaerurrozikin, A., & Zaid, A, H. (2020). The efficiency of using pictures in teaching speaking skills of non-native Arabic beginner

students. *Universal Journal of Educational Research 8*(3), 872-878. http://dx.doi.org/10.13189/ujer.2020.080318

Al-Kindi, N, S., & Al-Mekhlafi, A, M, (2017). The practice and challenges of implementing critical thinking skills in Omani post-basic EFL classrooms. *English Language Teaching, 10*(12), 116-133. https://eric.ed.gov/?id=EJ1160904

Allen, D., & Blythe, T. (2004). *The Facilitator's Book of Questions: Tools for Looking Together at Student and Teacher Work.* National Staff Development Council.

Aloysius, K, K., Hart, C, E., & Chen, P, K. (2016). Promoting higher-order thinking through teacher questioning: a case study of a Singapore science classroom. *New Waves Educational Research & Development, 19*(1), 1-19. https://eric.ed.gov/?id=EJ1211406

Anderson, L, W., & Krathwohl, D, R. (2001). *A Taxonomy for Learning Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Pearson Education.

Anderson, N. J. (2003). Metacognitive reading strategies increase L2 performance. *The Language Teacher*, 27, 20-22.

Anil, B. (2014). Higher order questioning in second language learning - a study. *Journal of Humanities and Social Sciences, 6*(1), 68-78.

Anwar, K. (2016). Panel discussion and the development of students' self-confidence. *English Language Teaching, 9*(4), 224-229. http://dx.doi.org/10.5539/elt.v9n4p224

Anwer, F. (2019). Activity-based teaching, student motivation and academic achievement. *Journal of Education and Educational Development, 6*(1), 154-170.

Ary, D., Jacobs, L, C., Sorensen, C., & Razavieh, A. (2010). *Introduction to Research in Education* (8th ed.). Nelson Education, Ltd.

Assaly, I, R., & Smadi, O. M. (2015). Using bloom's taxonomy to evaluate the cognitive levels of master class textbook's questions. *English Language Teaching, 8*(5), 100-110. https://eric.ed.gov/?id=EJ1075241

Astrid, A., Amrina, R, D., Desvitasari, D., Fitriani, U., & Shahab, A. (2019). The power of questioning: teacher's questioning strategies in the EFL classroom. *Indonesian Research Journal in Education, 3*(1), 91-106.

Baker, L. (2005). Developmental Differences in Metacognition: Implications for Metacognitively Oriented Reading Instruction. In Israel, et al., (Eds.), *Metacognition in Literacy Learning: Theory, Assessment, Instruction, and Professional Development* (61-80). Lawrence Erlbaum Associates, Inc.

Balcikanli, C. (2011). Metacognitive awareness inventory for teachers (MAIT). *Electric Journal of Research in Educational Psychology*, 9(3), 1309-1332.

Barzun, J., & Graff, H.F. (2003). *The Modern Researcher* (6th ed.). Wadsworth.

Beatty, I, D., Gerace, W, J., Leonard, W, J., & Dufresne, R, J. (2006). Designing effective questions for classroom response system teaching. *American Journal of Physics, 74*(1), 31–.39. https://doi.org/10.1119/1.2121753

Bell, J., & Waters, S. (2014). *Doing Your Research Project: A Guide for First-time Researchers* (6th ed.). Open University Press.

Bloom, B, S. (1956). *Taxonomy of Educational Objectives the Classification of Educational Goals*. David Mckay Company, Inc.

Blosser, P, E. (2000). *How to Ask the Right Questions.* The National Science Teachers Association.

Bordens, K. B., & Abbott, B. B. (2011). *Research Design and Methods: A Process Approach* (8th ed.). McGraw-Hill.

Bran, C., & Balas, E. (2011). Metacognitive regulation and in-depth learning. A study on the students preparing to become teachers. *Social and Behavioral Sciences*, 11, 107-111. https://doi.org/10.1016/j.sbspro.2011.01.043

Brookhart, S, M. (2010). *How to Assess Higher Order Thinking Skill in Your Classroom*. ASCD.

BSNP. (2013). *Peraturan Menteri Pendidikan Pendidikan dan Kebudayaan Republik Indonesia Nomor 69 Tahun 2013 Tentang Kerangka Dasar dan Struktur Kurikulum Sekolah Menengah Atas/Madrasah Aliyah*. BSNP.

Caprara, G, V., Barbaranelli, C., Steca, P., & Malone, P, S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology, 44*(6), 473–490.   https://doi.org/10.1016/j.jsp.2006.09.001

Chacon (2005). Teachers' perceived efficacy among English as a Foreign language teachers in middle schools in Venezuela. *Teaching and Teacher Education, 21*(3), 257–272.   https://doi.org/10.1016/j.tate.2005.01.001

Charlotte, E, W., Jarodzka, H., & Boshuizen, H, P. (2020). Classroom management scripts: a theoretical model contrasting expert and novice teachers' knowledge and awareness of classroom events. *Educational Psychology Review,* 1-18. https://doi.org/10.1007/s10648-020-09542-0

Chen, Y. (2019). Developing students' critical thinking and discourse level writing skill through teachers' questions: a sociocultural approach. *Chinese Journal of Applied Linguistics, 42*(2), 141–162. https://doi.org/10.1515/CJAL-2019-0009

Chin, C. (2006). Classroom Interaction in Science: Teacher questioning and feedback to students' responses. *International Journal of Science Education, 28*(11), 1315-1346 http://dx.doi.org/10.1080/09500690600621100

Christie, L, V., & Listyani. (2018). Teachers' strategies to improve students' self-confidence in speaking. *Register Journal, 11*(2), 121-138. http://dx.doi.org/10.18326/rgt.v11i2.139-153

Colas-Bravo, P., Magnoler, P., & Conde-Jimenez, J. (2018). Identification of levels of sustainable consciousness of teachers in training through an e-portfolio. *Sustainability, 10*(10), 1-18. https://doi.org/10.3390/su10103700

Costa, A, L., & Kallick, B. (2008). *Learning and Leading with Habits of Mind: 16 Essential Characteristics for Success.* Association for Supervision and Curriculum Development.

Cotton, K. (2001). *Classroom Questioning.* North West Regional Educational Laboratory.

Cottrell, S. (2005). *Critical Thinking Skills Developing Effective Analysis and Argument*. Palgrave Macmillan.

Coutinho, S., Wiemer-Hastings, K., Skowronski, J, J., & Britt, M, A. (2005). Metacognition, need for cognition and use of explanations during ongoing learning and problem solving. *Learning and Individual Differences*, 15, 321–337. https://doi.org/10.1016/j.lindif.2005.06.001

Creswell, J, W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches.* SAGE Publications Inc.

Creswell, J, W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th ed.). Pearson Education, Inc.

Cross, J. (2010). Metacognitive instruction for helping less-skilled listeners. *ELT Journal Volume, 65*(4), 408-416. https://doi.org/10.1093/elt/ccq073

Curwen, M, S., Miller, R, G., White-Smith, K, A., & Calfee, R, C. (2010). Increasing teachers' metacognition develops students' higher learning during content area literacy instruction: findings from the read-write cycle project. *Issues in Teacher Education, 19*(2), 128-151. https://digitalcommons.chapman.edu/education_articles/6/

De Backer, L, J., Keer, H, V., & Valcke, M. (2015). Promoting university students' metacognitive regulation through peer learning: the potential of reciprocal

peer tutoring. *Higher Education, 70*(3), 469–486. https://doi.org/10.1007/s10734-014-9849-3

De Backer, L., Van Keer, H., Moerkerke, B., & Valcke, M. (2016). Examining evolutions in the adoption of metacognitive regulation in reciprocal peer tutoring groups. *Metacognition and Learning, 11*(2), 187–213. https://doi.org/10.1007/s11409-015-9141-7

Dornyei, Z., & Taguchi, T. (2010*). Questionnaires in Second Language Research: Construction, Administration, and Processing* (2nd ed.). Routledge.

Dos, B., Bay, E., Aslansoy, C., Tiryaki, B., Cetin, N., & Duman, C. (2016). An analysis of teachers' questioning strategies. *Educational Research and Reviews, 11*(22), 2065-2078. https://doi.org/10.5897/ERR2016.3014

Etemadzadeh, A., Seifi, S., & Far, H. R. (2013). The role of questioning technique in developing thinking skills: the ongoing effect on writing skill. *Social and Behavioral Sciences,* 70, 1024 – 1031. https://doi.org/10.1016/j.sbspro.2013.01.154

Feng, Z. (2013). Using teacher questions to enhance EFL students' critical thinking ability. *Journal of Curriculum and Teaching, 2*(2), 147-153. http://dx.doi.org/10.5430/jct.v2n2p147

Flavell, J, H., Miller, P, H., & Miller, S. A. (2002). *Cognitive Development.* Pearson Education, Inc.

Ganaphaty, M., Mehar, M, K., Kaur, S., & Kit, L, W. (2017). Promoting higher order thinking skills via teaching practices. *The Southeast Asian Journal of English Language Studies, 23*(1), 757-85. http://doi.org/10.17576/3L-2017-2301-06

Garrison, D, R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education, 15*(1), 7-23. https://doi.org/10.1080/08923640109527071

Giavrimis, P., Papanis, E., & Papanis, E.-M. (2011). Information and communication technologies and development of learners' critical thinking: *Primary school teachers' attitudes. International Education Studies, 4*(3), 150–160. https://doi.org/10.5539/ies.v4n3p150

Ginting, A, A., & Kuswandono, P. (2020). Challenges faced by English teachers: implementation of higher order thinking skills (HOTS) in designing assignments in east Indonesia. *Pedagogy Journal of English Language Teaching, 8*(1), 13-23. https://doi.org/10.32332/pedagogy.v8i1.1688

Griffith, P, L., & Ruan, J. (2005). What Is Metacognition and What Should Be Its Role in Literacy Instruction? In Israel, et al (Eds.), *Metacognition in Literacy Learning: Theory, Assessment, Instruction, and Professional Development* (3-18). Lawrence Erlbaum Associates, Inc.

Goh, C. (2008). Metacognitive instruction for second language listening development: theory, practice and research implications. *RELC Journal, 39*(2), 188-213. https://doi.org/10.1177/0033688208092184

Gotoh, Y. (2016). Development of critical thinking with metacognitive regulation. *13th International Conference on Cognition and Exploratory Learning in Digital Age*, 353-356.

Hamied, A, F. (2017). *Research Methods: A Guide for First-Time Researchers*. UPI Press.

Hammann, L. A. (2005). Self-regulation in academic writing tasks. *International Journal of Teaching and Learning in Higher Education,* 17, 15–26. http://www.isetl.org/ijtlhe/

Hargrove, R, A., & Nietfeld, J, L. (2014). The impact of metacognitive instruction on creative problem solving. *The Journal of Experimental Education, 83*(3), 291–318. https://doi.org/10.1080/00220973.2013.876604

Hartman, H, J. (2001). Developing Students' Metacognitive Knowledge and Skills. In Hartman, H, J (Ed.), *Metacognition in Learning and Instruction: Theory, Research and Practice* (33-65). Springer-science+business media, b.v.

Hashim, R. (2003). Malaysian teachers' attitudes, competency and practices in the teaching of thinking. *Intellectual Discourse, 11*(1). 27-50.

Haukas, A. (2018). Metacognition in language learning and teaching: an overview In Haukas, A., Bjorke, C., & Dypedahl, M. *Metacognition in Language Learning and Teaching* (11-30). Routledge.

Hayikaleng, N., Nair, S, M., & Krishnasamy, H, N. (2016). Thai students' L2 reading comprehension level for lower order thinking skills and higher order thinking skills questions. *Journal of Applied Linguistics and Language Research, 3*(5), 83-91.

Howard, L, W., Tang, T, L., & Jill Austin, M. (2014). Teaching critical thinking skills: ability, motivation, intervention, and the Pygmalion effect. *Journal of Business Ethics, 128*(1), 133–147. https://doi.org/10.1007/s10551-014-2084-0

Ibrar, S., & Mukhaiyar. (2020). Composition of high order thinking skill in English course book for the tenth grade of senior high school in Indonesia. *Advances in Social Science, Education and Humanities Research,* 463, 81-89. https://doi.org/10.2991/assehr.k.200819.016

Iwai, Y. (2011). The effects of metacognitive reading strategies: pedagogical implications for EFL/ESL teachers. *The Reading Matrix, 11*(2), 150-159.

Jager, B, D., Jansen, M., & Reezigt, G. (2005). The development of metacognition in primary school learning environments. *An International Journal of Research, Policy and Practice, 16*(2), 179-196. http://dx.doi.org/10.1080/09243450500114181

Jessner, U. (2018). Metacognition in Multilingual Learning: A DMM Perspective. In Haukas, A., Bjorke, C., & Dypedahl, M. *Metacognition in Language Learning and Teaching* (31-47). Routledge.

Jiang, Y., Ma, L., & Gao, L. (2016). Assessing teachers' metacognition in teaching: the teacher metacognition inventory. *Teaching and Teacher Education,* 59, 403-413. https://doi.org/10.1016/j.tate.2016.07.014

Jin, Q., & Kim, M. (2018). Metacognitive regulation during elementary students' collaborative group work. *Interchange,* 1-19. https://doi.org/10.1007/s10780-018-9327-4

Jonassen, D, H. (2000). Toward a design theory of problem solving. *ETR&D, 48*(4), 63-85. https://doi.org/10.1007/BF02300500

Judge, B., Jones, P., & McCreery, E. (2009). *Critical Thinking Skills for Education Students*. Learning Matters Ltd.

Kazemian, M., Irawan, L, A., & Haerazi. (2021). Developing metacognitive writing strategy to enhance writing skills viewed from prospective teachers' critical thinking skills. *Electronic Journal of Language and Literature Studies, 1*(1), 15-28. https://doi.org/10.36312/ejolls.v1i1.499

Khan, I. A. (2011). Challenges of teaching or learning English and management. *Global Journal of Human Social Science,* 11, 68-79.

King, F, J., Goodson, L., & Rohani, F. (2012). Higher Order Thinking Skills. *Center for Advancement of Learning and Assessment*, 1-176.

Kocak, R., & Boyaci, M. (2010). The predictive role of basic ability levels and metacognitive strategies of students on their academic success, *2*(2), 767–772. https://doi.org/10.1016/j.sbspro.2010.03.099

Koufetta-Menicou, C., & Scaife, J. (2000). Teachers' questions – types and significance in science education. *School Science Review, 81*(296), 79-84.

Krathwohl, D, R. (2002). A Revision of Blooms Taxonomy: An Overview. *Theory into Practice, 41*(4), 212-218. https://doi.org/10.1207/s15430421tip4104_2

Ku, K, L., & Ho, I, T. (2010). Metacognitive strategies that enhance critical thinking. *Metacognition Learning*, 5, 251-267. https://doi.org/10.1007/s11409-010-9060-6

Kuhn, D., & Dean, D. (2004). Metacognition: a bridge between cognitive psychology and educational practice. *Theory into Practice, 43(*4), 268-273. http://dx.doi.org/10.1207/s15430421tip4304_4

Kumar, R. (2011). *Research Methodology: A step-by-step guide for beginner*. SAGE Publications Ltd.

Lee, C, B., Teo, T., & Bergin, D. (2009). Children's use of metacognition in solving everyday problems: an initial study from an Asian context. *The Australian Educational Researcher, 36*(3), 89-102. https://doi.org/10.1007/BF03216907

Lee, C, B., & Teo, T. (2011). Shifting pre-service teachers' metacognition through problem solving. *The Asia-Pacific Education Researcher, 20*(3), 583-590.

Li, L. (2011). Obstacles and opportunities for developing thinking through interaction in language classrooms. *Thinking Skills and Creativity,* 6, 146-158. https://doi.org/10.1016/j.tsc.2011.05.001

Limbach, B., & Waugh., W. (2010). Developing higher level thinking. *Journal of Instructional Pedagogies,* 1-9. https://eric.ed.gov/?id=EJ1097083

Lin, X., Schwartz, D, L., & Hatano, G. (2005). Toward teachers' adaptive metacognition. *Educational Psychologist, 40*(4), 245-255. https://doi.org/10.1207/s15326985ep4004_6

Lipman, M. (2003). *Thinking in Education*. (2nd ed.). Cambridge University Press.

Maggioni, L., & Parkinson, M, M. (2008). The role of teacher epistemic cognition, epistemic beliefs, and calibration in instruction. *Educ Psychol Rev*, 20, 445-461. https://doi.org/10.1007/s10648-008-9081-8

Mappiasse, S, S., & Bin, A, J. (2014). Evaluation of English as a Foreign Language and Its Curriculum in Indonesia: A Review. *English Language Teaching, 7*(10), 113-122. https://files.eric.ed.gov/fulltext/EJ1075934.pdf

Meier, A, M., & Vogt, F. (2015). The potential of stimulated recall for investigating self-regulation processes in inquiry learning with primary school students.

Perspectives in Science, 5, 45-53. https://doi.org/10.1016/j.pisc.2015.08.001

Memnun, D, S., & Akkaya, R. (2009). The levels of metacognitive awareness of primary teacher trainees. *World Conference on Educational Sciences, 1*(1), 1919–1923. https://doi.org/10.1016/j.sbspro.2009.01.337

Meng, J., Zhao, T., & Chattouphonexay, A. (2012). Teacher questions in a content-based classroom for EFL young learners. *Theory and Practice in Language Studies, 2*(12), 2603-2610. https://doi.org/10.4304/tpls.2.12.2603-2610

Myres, M., & Paris, S, G. (1978). Children's metacognitive knowledge about reading. *Journal of Educational Psychology,* 70, 680-690. https://doi.org/10.1037/0022-0663.70.5.680

Nagappan, R. (2000). Language teaching and the enhancement of higher-order thinking skills. *Language Curriculum and Instruction in Multicultural Societies.* 1-38. https://nsrajendran.tripod.com/Papers/RELC2000A.pdf

Navidinia, H., Ozhan, A, R., & Younesi, A. (2019). Using pictures in EFL classrooms: exploring its potential contribution for developing students' writing skill, 1-17. http://dx.doi.org/10.21315/apjee2018.33.1

Oppong, S, H. (2013). The problem of sampling in qualitative research. *Asian Journal of Management Sciences and Education, 2*(2), 202-210.

Oxford, R. (2002). Language learning strategies. In R. Carter and D. Nunan (Eds.). *The Cambridge guide to teaching English to speakers of other languages* (pp. 166-172). Cambridge University Press.

Papaleontiou-louca, E. (2003). The concept and instruction of metacognition. *Teacher Development,* 7(1), 9-30. https://doi.org/10.1080/13664530300200184

Parlan, P., & Rahayu, S. (2021). Students' higher order thinking skills (HOTS) in metacognitive learning strategy. T*he 4th International Conference on*

Mathematics and Science Education (ICoMSE), 1-7. https://doi.org/10.1063/5.0043150

Parsons, M., & Stephenson, M. (2005). Developing reflective practice in student teachers: collaboration and critical partnerships. *Teachers and Teaching: theory and practice, 11*(1), 95-116. https://doi.org/10.1080/1354060042000337110

Paul, R., & Elder, L. (2008). *The Miniature Guide to Critical Thinking Concepts and Tools.* Foundation for Critical Thinking Press.

Pintrich, P, R. (2002). The role of metacognitive knowledge in learning, teaching, and assessing. *Theory into Practice, 41*(4), 219-225. https://doi.org/10.1207/s15430421tip4104_3

Rahimi, M., & Katal, M. (2012). Metacognitive strategies awareness and success in learning English as a foreign language: an overview. *Social and Behavioral Sciences,* 31, 73-81. https://doi.org/10.1016/j.sbspro.2011.12.019

Ramadhana, N, A., Rozimela, Y., & Fitrawati. (2018). High order thinking skills-based questions in the test items developed by senior high school English teachers of Padang. *Journal of English Language Teaching, 7*(4), 1-12. https://doi.org/10.24036/jelt.v7i4.101757

Raoofi, S., SweeHengChan., Mukunda, J., & Rashid, S, M. (2014). Metacognition and Second/Foreign Language Learning. *English Language Teaching, 7*(1), 36-49. https://files.eric.ed.gov/fulltext/EJ1075657.pdf

Rasekh, E., & Ranjbary, R. (2003). Metacognitive strategy training for vocabulary learning. *Tesl-Ej: Teaching English as a Second or Foreign Language, 7*(2), 1-15.

Ratnaningsih, S. (2017). Scientific approach of 2013 curriculum teachers' implementation in English language teaching. *English Review: Journal of English Education, 6*(1), 33-40. https://doi.org/10.25134/erjee.v6i1.768

Raub, L, A., Shukor, N, A., Arshad, M, Y., & Rosli, M, S. (2015). An Integrated Model to Implement Contextual Learning with Virtual Learning Environment for Promoting Higher Order Thinking Skills in Malaysian Secondary Schools. *International Education Studies, 8*(13), 41-46. http://dx.doi.org/10.5539/ies.v8n13p41

Retnawati, H., Djidu, H., Kartianom, Apino, E., & Anazifa, R, D. (2018). Teachers' knowledge about higher-order thinking skills and its learning strategy. *Problems of Education in the 21ˢᵗ Century, 76(*2), 1-17.

Riwayatiningsih, R., Setyarini, S., & Azmi, R, A. (2021). Portraying teacher's metacognitive knowledge to promote EFL young learners' critical thinking in Indonesia. *International Journal of Language Education. 5*(1), 552-568.

Rodriguez, V., & Solis, S, L. (2013). Teachers' awareness of the learner-teacher interaction: preliminary communication of a study investigating the teaching brain. *Mind, Brain, and Education, 7*(3), 161–169. https://doi.org/10.1111/mbe.12023

Rohmah, Z. (2002). Teacher's questions in reading classes. *TEFLIN Journal, 13*(2), 163-174.

Rojas-Drummond, S., & Mercer, N. (2003). Scaffolding the development of effective collaboration and learning. *International Journal of Educational Research, 39*(1-2), 99–111. https://doi.org/10.1016/S0883-0355(03)00075-2

Safari, Y., & Meskini, H. (2016). The effect of metacognitive instruction on problem solving skills in Iranian students of health sciences. *Global Journal of Health Science, 8*(1), 150-156. https://doi.org/10.5539/gjhs.v8n1p150

Salmani, M, A. (2008). The role of metacognition in the language teaching progression. *I-manager's Journal on Educational Psychology, 2*(1), 1-9. https://files.eric.ed.gov/fulltext/ED502896.pdf

Sarwinda, K., Rohaeti, E., & Fatharani, M. (2020). The development of audio-visual media with contextual teaching learning approach to improve learning motivation and critical thinking skills. *Psychology, Evaluation, and Technology in Educational Research, 2*(2), 98-114. http://dx.doi.org/10.33292/petier.v2i2.12

Schraw, G., & Dennison, R, S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology,* 19, 460-475.

Schraw, G., & Moshman, D. (1995). Metacognitive theories. *Educational Psychology Review, 7*(4), 351-371. https://doi.org/10.1007/BF02212307

Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science*, 26, 113-125. https://doi.org/10.1023/A:1003044231033

Schraw, G. (2001). Promoting General Metacognitive Awareness. In Hartman, H, J (Ed.), *Metacognition in Learning and Instruction: Theory, Research and Practice* (3-16). Springer-science+business media, b.v.

Schunk, D, H., Meece, J, R., & Pintrich, P, R. (2014). Expectancy-Value Theory. In Schunk, D, H., Meece, J, R., & Pintrich, P, R (Eds.), *Motivation in Education Theory, Research and Applications* (51-90). Pearson Education Limited.

Scott, D & Usher, R. (2011). *Research Education "Data Methods and Theory in Educational Enquiry* (2nd ed.). Continuum International Publishing Group.

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. https://doi.org/10.17509/ijal.v8i1.11480

Setyarini, S. (2019). Promoting learner autonomy in teaching English to young adolescents through higher order thinking skills: an innovation to create 4.0 learning trends. *Advances in Social Science, Education and Humanities Research,* 335, 382-387. https://doi.org/10.2991/icesshum-19.2019.62

Shank, G., Brown, L., & Pringle, J. (2014). *Understanding Education Research A Guide to Critical Reading*. Paradigm Publishers.

Singer, A, J., Hines, S, M., & Murphy, M, O. (2003). *Teaching to Learn, Learning to Teach: A Handbook for Secondary School Teachers.* Lawrence Erlbaum Associates, Publishers.

Singh, R, K., Singh, C, K., T, T, M., Mostafa, N, A., & Singh, T, S. (2018). A review of research on the use of higher order thinking skills to teach writing. *International Journal of English Linguistics, 8*(1), 86-93. http://doi.org/10.5539/ijel.v8n1p86

Songbatumis, A, M. (2017). Challenges in teaching English faced by English teachers at MTSN Taliwang, Indonesia. *Journal of Foreign Language Teaching & Learning, 2*(2), 54-67. https://doi.org/10.18196/ftl.2223

Soureshjani, K, H., & Riahipour, P. (2012). Demotivating factors on English speaking skill: a study of EFL language learners and teachers' attitudes. *World Applied Sciences Journal, 17*(3), 327-339.

Spruce, R., & Bol, L. (2015). Teacher beliefs, knowledge, and practice of self-regulated learning. *Metacognition Learning*, 10, 245–277. https://doi.org/10.1007/s11409-014-9124-0

Stokes, S. (2002). Visual literacy in teaching and learning: a literature perspective. *Electronic Journal for the Integration of Technology in Education, 1*(1), 10-19.

Stupnisky, R, H., Renaud, R, D., Daniels, L, M., Haynes., T, L., & Perry, R, P. (2008). The interrelation of first-year college students' critical thinking disposition, perceived academic control, and academic achievement. *Res High Educ*, 49, 513–530. https://doi.org/10.1007/s11162-008-9093-8

Sundayana, W. (2015). Readiness and competence of senior high school English teachers to implement curriculum 2013. *Indonesian Journal of Applied Linguistics, 5*(1), 29-36. https://doi.org/10.17509/ijal.v5i1.828

Swaran, C, K., Masa, T, S., Ja'afar, H., Kaur, H., & Mostafa, N, A., Md, M. (2020). Teaching strategies to develop higher order thinking skills in English literature. *International Journal of Innovation, Creativity and Change, 11*(8), 211-231.

Teng, M, F. (2019). The role of metacognitive knowledge and regulation in mediating university EFL learners' writing performance. *Innovation in Language Learning and Teaching,* 1–15. https://doi.org/10.1080/17501229.2019.1615493

Tofade, T., PharmD, MS., Elsner, J. MS., & Haines, S, T. (2013). Best practice strategies for effective use of questions as a teaching tool. *American Journal of Pharmaceutical Education, 77*(7), 1-9.

Toni, A., & Parse, F. (2013). The status of teacher's questions and students' responses: the case of an EFL class. *Journal of Language Teaching and Research, 4*(3), 564-569. https://doi.org/10.4304/jltr.4.3.564-569

Tuckett, A. (2004). Qualitative research sampling-the very real complexities. *Nurse Researcher, 12*(1), 47-61.

Tyas, M, A., Nurkamto, J., Marmanto, S., & Laksani, H. (2019). Developing higher order thinking skills (HOTs)-based questions: Indonesian EFL teachers' challenges. *Proceeding of the 2nd International Conference on Future of Education, 2*(1), 52-63. https://doi.org/10.17501/26307413.2019.2106

Vainikainen, M, P., Hautamaki, J., & Hotulainen, R. (2015). General and specific thinking skills and schooling: Preparing the mind to new learning. *Thinking Skills and Creativity,* 1-23. https://doi.org/10.1016/j.tsc.2015.04.006

Vebriyanto, D, A. (2015). Teacher's questions in EFL classroom interaction. *Journal Vision. 4*(2), 279-303.

Veenman, M, V., Kok, R., & Blote, A, W. (2005). The relation between intellectual and metacognitive skills 2 in early adolescence. Instructional Science, 33, 193-211. https://doi.org/10.1007/s11251-004-2274-8

Wagenaar, A., Scherpbier, A.J., Boshuizen, H, P., & Van Der, C, P. (2003). The importance of active involvement in learning: a qualitative study on learning results and learning processes in different traineeships. *Advances in Health Sciences Education, 8*(3), 201–212. https://doi.org/doi:10.1023/a:1026036707461

Wan, W, M., & Seman, S, C. (2018). Teachers' knowledge of higher order thinking and questioning skills: a case study at a primary school in Terengganu, Malaysia. *International Journal of Academic Research in Progressive Education and Development, 7*(2), 45–63. http://dx.doi.org/10.6007/IJARPED/v7-i2/4120

Wang, J., Spencer, K., & Xing, M. (2009). Metacognitive beliefs and strategies in learning Chinese as a foreign language. *System,* 37, 46-56. https://doi.org/10.1016/j.system.2008.05.001

Wichadee, S. (2011). The effects of metacognitive strategy instruction on EFL Thai students' reading comprehension ability. *Journal of College Teaching and Learning, 8*(5), 31-40.

Wilson, N, S., & Bai, H. (2010). The relationships and impact of teachers' metacognitive knowledge and pedagogical understandings of metacognition. *Metacognition Learning*, 5, 269-288. https://doi.org/10.1007/s11409-010-9062-4

Wiyono, S. (2017). The 21st century the turning point of the English language teaching in Indonesia. *The 4th International Conference on Language, Society and Culture in Asian Contexts, KnE Social Sciences*, 303–310. https://www.knepublishing.com/index.php/Kne-Social/article/view/750

Wragg, E, C., & Brown, G. (2001a). *Questioning in the Secondary School*. Routledge Falmer.

Yen, T. S., & Halili, S, H. (2015). Effective teaching of higher-order thinking (hot) in education. *The Online Journal of Distance Education and e-Learning,*

*3(*2), 41-47. http://www.tojdel.net/journals/tojdel/articles/v03i02/v03i02-04.pdf

Yildiz, H., & Akdag, M. (2017). The effect of metacognitive strategies on prospective teacher's metacognitive awareness and self-efficacy belief. *Journal of Education and Training Studies, 5*(12), 30-40.

Zohar, A. (1999). Teachers' metacognitive knowledge and the instruction of higher order thinking. *Teaching and Teacher Education,* 15, 413-429. https://doi.org/10.1016/S0742-051X(98)00063-8

Zohar, A. (2013). Challenges in wide scale implementation efforts to foster higher order thinking (HOT) in science education across a whole school system. *Thinking Skills and Creativity,* 10, 233–249. https://doi.org/10.1016/j.tsc.2013.06.002

Zohar, A., & David, A, B. (2009). Paving a clear path in a thick forest: a conceptual analysis of a metacognitive component. *Metacognition Learning*, 4, 177-195. https://doi.org/10.1007/s11409-009-9044-6

Zohar., & Dori, Y, J. (2003). Higher order thinking skills and low-achieving students: are they mutually exclusive? *Journal of the Learning Sciences, 12*(2), 145–181. http://doi.org/10.1207/S15327809JLS1202_1

Zohar, A., & Schwartzer, N. (2005). Assessing teachers' pedagogical knowledge in the context of teaching higher-order thinking. *International Journal of Science Education, 27*(13), 1595-1620. https://doi.org/10.1080/09500690500186592