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ELT IN A GLOBALIZED WORLD: THE BOUNDARIES AND BEYOND

Fostering ways of thinking in learning activities of English teaching lesson plans at senior high school

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Abstract
Recently, there has been a lot of interest in the 21st century framework by ATC21S. One of them is ways of thinking, which includes creativity and innovation, critical thinking, problem-solving and decision making. Incorporating ways of thinking into the teaching and learning process has been broadly employed, particularly in science. However, there is a lack of focus on English Foreign Language, particularly in English teaching lesson plans that incorporate the ways of thinking. Therefore, this study aims to explore the ways of thinking, principally critical thinking, creative thinking, and problem-solving, which are categorized as High Order Thinking Skills (HOTS), in the learning activities of the 11th grade English teaching lesson plan at Senior High School. A content analysis method was used in this study. The data was analyzed using a systematic content descriptive text based on Anderson and Krathwohl's Taxonomy's cognitive levels and ACTS21S framework descriptors. The data sources of this study are 5 lesson plans from 2 different senior high schools in Jakarta. The findings revealed that the ways of thinking throughout full lesson plans were insufficiently incorporated with learning activities. This result can be used to foster and realign existing lesson plans to meet and to enrich with the descriptors of higher-order thinking skills.
Keywords: 21st-century; English teaching lesson plan; Higher-Order Thinking Skills; Senior high school; Ways of thinking.

1. Introduction

Thinking skills are one of the 21st century skills masters in the digital era. According to some evidence, there was a lot of research done on different ways of thinking. Many recent studies have focused on critical thinking in science. Vieira & Tenreiro-Vieira (2014) reports that the learning experiences created and implemented in a sixth-grade science classroom had a significant impact on students' critical thinking and scientific literacy. However, less attention has been focused on lesson plans purposely for learning activities. Because of its recent existence, this study is considered important for further investigation. Therefore, this study aims to explore the ways of thinking, principally critical thinking, creativity and innovation, and problem-solving, which are categorized as High Order Thinking Skills (HOTS), in the learning activities of the 11th grade English teaching lesson plan at Senior High School.

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In a globalized world, people are expected to have some skills which are called 21st-century skills. 21st-century skills are considered as essential abilities for dealing with the challenges of the present era. As stated by Shelia (2014), 21st-century skills are crucial because of the increased global economy, rising workforce capabilities, and rapid technology development. Besides, those skills are required by students to ensure that they are well prepared for the global workplace. In line with Shelia (2014), 21st-century skills are essential to assist in preparing students to compete in a global economy. Furthermore, Alismail & McGuire (2015) states that these skills are necessary for students in order to thrive in their future careers as well as to compete successfully in the global economy. In brief, 21st-century skills are the skills that should be required by students in order to succeed in the global workplace.

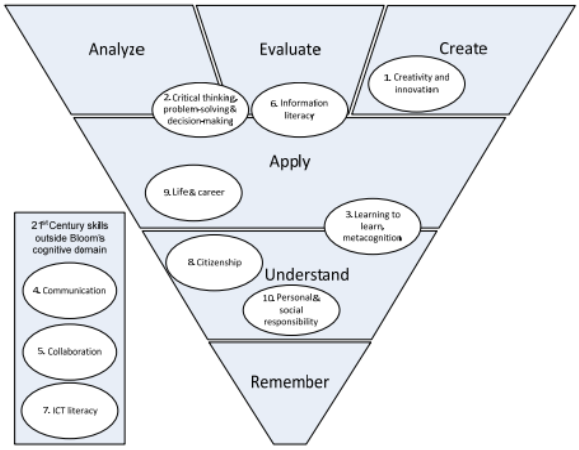
In this context, the researchers used one of frameworks of 21st-century skills, namely Assessment and Teaching of 21st-Century Skills (ATC21s) framework by Griffin & McGaw (2012). Assessment and Teaching of 21st-Century Skills (ATC21s) organize skills, knowledge, attitudes, values and ethics of 21st century into four categories (Chalkiadaki, 2018; Saavedra & Opfer, 2012); they are ways of thinking, ways of working, tools of working and living in the world. One of the most significant is the ways of thinking. In the category of ways of thinking, there are various types of thinking skills included, such as: critical thinking, creativity and innovation, problem-solving and decision making.

Thinking skills are the core of educational development among students. The prominence of thinking skills in all subjects allows students to make rational and more objective decisions (Nadara & Peng, 2018). Some of those thinking skills, such as critical thinking, creativity and innovation and problem-solving, are categorized as higher-order thinking skills (HOTS). As mentioned by Brookhart (2010) (cited in Tyas et al., 2019), transfer, critical thinking, and problem-solving are categorized as higher-order thinking skills. Brookhart (2010) added that interconnected, generally "higher-order" cognitive skills that allow individuals to comprehend experiences and information, apply knowledge, express complex concepts, make decisions, criticize and revise inadequate constructs, and solve problems — commonly used for a cognitive approach to learning that views explicit "thinking skills" as teachable. Furthermore, Crawford and Brown (2002) classified HOTS into three categories of thinking: content, critical, and creative thinking (cited in Djami & Kuswandono, 2020). In brief, critical thinking and problem-solving are types of thinking skills which are categorized as higher-order thinking skills.

According to Suto & Eccles (2014), higher-order thinking levels in Anderson and Krathwol's framework, such as analyze, evaluate, and create, are related to the ATC21S framework's ways of thinking. Suto & Eccles (2014) identified several ways of thinking that are categorized as higher-order thinking level in Anderson and Krathwol's taxonomy, as follows: 1) the category of critical thinking and problem-solving include in the analyze and evaluate stage, and 2) the category of creativity and innovation include in the create stage. Therefore, Anderson and Krathwol's taxonomy and ATC21's

framework have interconnections, particularly in the area of ways of thinking. As a result, higher-order thinking skills comprise critical thinking, creativity and innovation, and problem-solving. Thus, the terminologies employed in this study are ways of thinking (WoT), which refer to the ATC21 framework, but only cover higher-order thinking skills such as critical thinking, creativity and innovation, and problem-solving. The figure 1 represents interconnection between ATC21s framework and Bloom's taxonomy revision. It shows that higher-order thinking levels in Blooms' taxonomy revision cover some ways of thinking, namely critical thinking, problem-solving, decision-making and creativity and innovation.

Figure 1. Interconnection between ATC21s framework and Bloom's taxonomy revision.



However, according to the results of the PISA survey, Indonesian children's thinking abilities are still considered low. One of the reasons for this is that Indonesian students are not well-trained in answering contextual questions that require intellectual activity, argumentation, and creativity to complete, especially when the questions are PISA characteristics questions that estimate HOTS. Moreover, Indonesia's students' critical thinking skills and creative thinking skills are still lacking. That statement is supported by Rosba et al., (2021), Indonesian students have low performance in critical thinking because educational institutions have not implemented 21st-century education, which requires students to build, analyze, evaluate, and infer knowledge and find solutions to the problems. Besides, according to a national education study conducted in Indonesia, the formal education system in the country still lacks possibilities for the development of creativity in general. Indonesia was placed 81st out of 82 countries in the Martin Prosperity Institute's 2010 Global Creativity Index. This phenomenon demonstrates that Indonesia's degree of creativity is still quite low. Thus, most of Indonesia's students lack thinking skills, particularly in critical thinking, creative thinking and problem-solving. The problems occurred because some of the educational institutions have not implemented 21st-century education.

In classroom learning activities, the following studies are related to the ways of thinking skills of creativity and innovation, critical thinking, and problem-solving, in context of language skills. The

first one is led by Miri & Azizi (2018). They conducted research on The Effect of Teaching Critical Thinking on Iranian EFL Learners' Essay Writing, as the result of posttest scores revealed, teaching writing while using cognitive strategies, especially critical thinking, would lead to better learning among EFL learners. Next, in a paper titled Critical Thinking and Autonomy in Speaking Ability: A Case Study by Bagheri (2018), the author asserts that critical thinking has a major impact on a student's oral ability. Teachers should enhance students' critical thinking abilities in order to increase their capacity to talk. These abilities relate to their ability to think through student challenges and difficult learning tasks in order to completely negotiate knowledge and give students additional possibilities. It is also supported by Huh & Lee, (2020) conducted a study to investigate how SMART learning settings affect the creativity and English skills of elementary English as a foreign language (EFL) student. The results showed a statistically significant increase in fluency, adaptability, and originality in creative thinking skills. In short, in terms of English, students' speaking and writing skills improved significantly.

In line with that research, ways of thinking are also discussed in the context of critical thinking and problem-solving, particularly in students' perspectives and English Specific Purposes. Tuzlukova & Usha-Prabhukanth (2018) conducted a study titled Critical Thinking and Problem-Solving Skills: English for Science Foundation Program Students' Perspectives. The broad goal is to offer a complete picture of how critical thinking and problem-solving skills teaching and learning approaches, concepts, and practices are used in Oman's ESP foundation programs. It focuses on a range of issues and context-specific elements linked to ESP and critical thinking skills teaching, learning, and outcomes, using the example of English for Science Foundation program courses. As a result, while the majority believe critical thinking and problem-solving skills are essential for future success, their understanding of these skills appears uncertain.

The main reason why researchers selected lesson plans for this study is because the lesson plans serve as a guide for practical learning. It is supported by Ratnawati (2017), lesson plan is a written processes of activities in the teaching and learning process. And why learning activities? Because the researchers believe that learning activities provide a significant opportunity to challenge and implement ways of thinking. It is reinforced by Nadara & Peng (2018) revealed that the incorporation of critical and creative thinking skills (CCTS) in the teaching and learning of the Malay language literary component at secondary schools achieve optimal learning outcomes.

In table 1 and table 2, present the ATC21s framework which consist of knowledge, skills, attitude, values and ethics. Each item represents the descriptors of ways of thinking, namely critical thinking, creativity and innovation, and problem-solving. The function of this framework descriptors as a parameter for analyzing WoT exist in learning activities.

Table 1. ATC21s ways of thinking framework – creativity and innovation

Knowledge	***Skills***	***Attitudes, Values, and Ethics***
Think and work creatively and with others	*Think creatively* • Create new and	*Think creatively* ● Be open to new and

● Know a wide range of idea creation techniques (such as brainstorming) ● Be aware of invention, creativity, and innovation from the past within and across national boundaries and cultures ● Know the real-world limits to adopting new ideas and how to present them in more acceptable forms ● Know how to recognize failures and differentiate between terminal failure and difficulties to overcome *Implement innovations* ● Be aware of and understand where and how innovation will impact and the field in which the innovation will occur ● Be aware of the historical and cultural barriers to innovation and creativity	worthwhile ideas (both incremental and radical concepts) • Be able to elaborate, refine, analyze, and evaluate one's own ideas in order to improve and maximize creative efforts *Work creatively with others* ● Develop, implement, and communicate new ideas to others effectively ● Be sensitive to the historical and cultural barriers to innovation and creativity *Implement innovations* • Develop innovative and creative ideas into forms that have impact and can be adopted	worthwhile ideas (both incremental and radical) *Work creatively with others* ● Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work ● View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistake *Implement innovations* ● Show persistence in presenting and promoting new ideas

Table 2. ATC21s ways of thinking framework – critical thinking, problem-solving, decision making

Knowledge	***Skills***	***Attitudes, Values, and Ethics***
Reason effectively, use system thinking and evaluate evidence ● Understand systems and strategies for tackling unfamiliar problems ● Understand the importance of evidence in belief formation. Reevaluate beliefs when presented with conflicting evidence *Solve problems* ● Identify gaps in knowledge ● Ask significant questions that clarify various points of view and lead to better solutions *Articulation* ● Clearly articulate the results of one's inquiry	*Reason effectively* ● Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation *Use systems thinking* ● Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems. Examine ideas, identify and analyze arguments. ● Synthesize and make connections between information and arguments ● Interpret information and draw conclusions based on the best analysis. Categorize, decode and clarify information. ● Effectively analyze and	*Make reasoned judgments and Decisions* ● Consider and evaluate major alternative points of view ● Reflect critically on learning experiences and processes Incorporate these reflections into the decision-making process. *Solve problems* ● Be open to non-familiar, unconventional and innovative solutions to problems and to ways to solve problems ● Ask meaningful questions that clarify various points of view and lead to better solutions *Attitudinal disposition* ● Trustful of reason ● Inquisitive and concerned to be well informed Open

	evaluate evidence, arguments, claims and beliefs ● Analyze and evaluate major alternative points of view ● Evaluate. Assess claims and arguments. ● Infer. Query evidence, conjecture alternatives and conclude. ● Explain. Stating results, justifying procedures and presenting arguments. ● Self-regulate, self-examine and self-correct.	and fair-minded ● Flexible and honest ● Inquisitiveness and concern to be well informed ● Alert to opportunities to use ICT ● Trustful of and confident in reason ● Open and fair-minded, flexible in considering alternative opinions ● An honest assessment of one's own biases ● Willingness to reconsider or revise one's views where warranted.

Bloom's Taxonomy is the most widely used classification system in education, and it may be thought of as a set of thinking skills that encompasses the lower-level thinking to the higher-level thinking (Singh & Shaari, 2019). Bloom's Taxonomy is a classification of intellectual processing abilities that range from simple to complicated or concrete to abstract. It consists of three parts; cognitive domain, effective domain, and psychomotor domain. Bloom's Taxonomy was revised by Anderson & Krathwol (2001). The main distinction between Bloom's taxonomy's old and new versions is that the 2001 version has two dimensions: knowledge and cognitive dimension. Anderson changed Bloom's categories from nouns to verbs, altering the original terminology. Anderson also rearranged the synthesis order, putting it at the top of the triangle under the name Create. The revised Bloom's taxonomy of Anderson and Krathwohl (2001) became: Remember, Understand, Apply, Analyze, Evaluate, and Create. Anderson and Krathwohl's Taxonomy (2001) divide these cognitive levels into two; Lower-order thinking (LOT) is at the level of remembering (C1), understanding (C2), and applying (C3), while Higher-order thinking (HOT) is at the level of analyzing (C4), evaluating (C5), and creating (C6). In brief, this study used the Anderson & Krathwohl framework.

Table 3. Description and keyword of Anderson and Krathwol's taxonomy

Category	Key words	
Remembering (C1)	Mention the definition, imitate the pronunciation, state structure, pronounce, repeat, state	Lower-order thinking skills (LOTS)
Understanding (C2)	Classify, describe, explain the identification, place, report, explain, translate, paraphrased.	
Applying (C3)	Choosing, demonstrating, acting using, illustrating, interpreting, arranging schedule, making sketch, solving problem, writing	
Analysing (C4)	Examining, comparing, contrasting, distinguish, doing discrimination, separating, test, doing experiment, asking	Higher-order thinking skills (HOTS)

Evaluating (C5)	Giving argumentation, defending, stating, choosing, giving support, giving assessment, doing evaluation
Creating (C6)	Assemble, change, build, create, design, establish, formulate, write.

On the revision of Bloom's Taxonomy, Anderson and Krathwohl (2001) explain the three highest levels of cognitive process dimensions, which include analyzing, evaluating, and creating:

First, analyze entails deconstructing a substance into its component pieces and identifying how the parts are connected to one another and to a larger structure. Differentiating, organizing, and attributing are all cognitive activities that fall under this category. Second, evaluate is defined as making judgments based on criteria and standards. Quality, effectiveness, efficiency, and consistency are the most commonly utilized criteria. The cognitive processes of checking (internal consistency judgments) and criticizing are included under the category assess (judgments based on external criteria). Third, create involves putting components together to make a coherent or functional whole. Create objectives require students to create a new product by mentally arranging some materials or parts into a pattern or structure that was not previously apparent. As a result, the creative process can be thought of as beginning with a divergent phase in which the student considers a number of different solutions while attempting to comprehend the task (generating). The learner then moves on to a convergent phase, in which they develop a solution approach and converts it into a plan of action (planning). Finally, when the learner creates the solution, the plan is carried out (producing).

The table 4, illustrates higher-order thinking skills dimensions by Anderson and Krathwols's taxonomy which cover categories of higher-order thinking, dimensions, and examples of each verb.

Table 4. Higher-order thinking skills dimensions of Bloom's taxonomy revision

Category	Dimensions	Examples
Analysing	Differentiating	● List the important information in a research article ● Draw a diagram showing the characters in a novel
	Organizing	● Place the music into categories. ● Make a chart of often-used figurative devices and explain their effect. ● Make a diagram showing the ways plants and animals in your neighbourhood interact with each other.
	Attributing	● Read letters to the editor to determine the authors' points of view about a local issue. ● Determine a character's motivation in a novel or short story.

		● Look at newspapers of government and hypothesize about their perspectives on issues
Evaluating	Checking	● Participate in a writing group, giving peers feedback on organization and logic of arguments. ● Review a project plan to see if all the necessary steps are included.
	Critiquing	● Judge how well a project meets the criteria of a rubric. ● Choose the best method for solving a complex mathematical problem.
Creating	Generating	● Given a list of criteria, list some options for improving race relations in the school. ● Generate several scientific hypotheses to explain why plants need sunshine. ● Propose a set of alternatives for reducing dependence on fossil fuels that address both economic and environmental concerns. ● Come up with alternative hypotheses based on criteria
	Planning	● Make a storyboard for a multimedia presentation on insects. ● Outline a research paper ● Design a scientific study
	Producing	● Write a journal from the point of view of an exiled South African in the 1970's. ● Build a habitat for local water fowl. ● Put on a play based on a chapter from a novel you're reading.

In brief, this research intended to explore the extent of ways of thinking in learning activities in the existing lesson plans at Senior High School. Therefore, the research question for this study were formulated as follow:

- To what extent are ways of thinking fostering learning activities in the existing lesson plan at 11^{th} grade of senior high school?

2. Research Methodology

The content analysis method was employed in this study, which was defined by Ary et al. (2010). Content analysis, also known as document analysis, can be used to analyze a wide range of documents, including lesson plans, particularly in learning activities.

Data was collected for a specific purpose by selecting two private schools in Jakarta. Because the researcher was given permission and the opportunity to collect data sources. The data sources were five 11th grade English teaching lesson plans that were collected from two in-service teachers at two different senior high schools in Jakarta. SMA A provided three lesson plans. SMA B also contributed two lesson plans. The data was the verbs which represent the activities. Because this study was limited to only two private schools, the findings cannot be generalized to SMA in Jakarta.

Furthermore, the data was analyzed using Anderson and Krathwol's taxonomy descriptors and ATC21S framework descriptors. First, the researchers read and select the learning activities which consist of verbs that are included in descriptors. Secondly, the researchers codify the verbs and the descriptors of higher-order thinking skills. Thirdly, verbs analyze which belong to the descriptors of higher-order thinking skills. Fourthly, the data were interpreted and presented in a table format.

3. Results and Discussion

After formulating and analyzing the data descriptively, the analysis resulted from existing lesson plans in the learning activities section at 11th grade senior high school. In table 5, illustrates lesson plans, number of activities, action verbs in learning activities and classification of HOTS.

Table 5. Learning activities in lesson plans

Lesson plans	Number of activities	Action Verbs	Classification of HOTS
1	1	Menentukan	Analyse
2	1	Menyusun	Create
3	1	Mengomentari	Evaluate
4	1	Membandingkan	Analyse
5	2	Menanggapi	Evaluate
		Membuat	Create

In the table 5 shows that five lesson plans have already fostered ways of thinking (WoT) which are categorized as higher-order thinking skills, such as analyze, evaluate and create. Unfortunately, it is that only one exercise that is included in each of the four lesson plans. Meanwhile, in lesson plan number 5, there are two activities which contain HOTS level.

From table 5, the HOTS levels showed that learning activities part of all lesson plans are levels C4, C5 and C6. These findings verified with Griffin (2012) and Anderson and Krathwol (2001) that higher-order thinking level, such as analyze, evaluate and create, belong to ways of thinking. HOTS level C4 in the analysis stage is found in lesson plans numbers 1 and 4 with the action verbs "*Menentukan*" and "*Membandingkan*". Furthermore, HOTS level C5 in the evaluate stage is found in

lesson plans numbers 3 and 5 with the action verbs "*Mengomentari*" and "*Menanggapi*". Finally, HOTS level C6 in the creating stage is found in lesson plans no. 2 and 5 with the action verbs "*Menyusun*" and "*Membuat*". Therefore, it can be seen that all HOTS classifications, from C4 to C6, are found in the learning activities section.

In lesson plans number 1 and 4, there were found activities that included WoT in the critical thinking category where students are asked to think critically in analyzing something. In line with the ATC21S framework, that activity allows students to interpret information and draw conclusions based on the best analysis. In addition, these activities are included in the HOTS level C4, where students are in the analyze phase. In lesson plan number 1 students are asked to discuss with groups and determine social functions, text structure and linguistic elements to give and ask for opinions with the verb "*distinguish*". Meanwhile, in lesson plan number 4, students were asked to compare the various expressions used to give suggestions and offers that they saw in the video provided by the teacher. The HOTS verb found in lesson plan number 4 is "*comparing*".

> "***Menentukan*** *fungsi sosial, struktur teks dan unsur kebahasaan memberi dan meminta pendapat dan pikiran(I think, I suppose, in my opinion*)" (Lesson plan no. 1)

> "***Membandingkan*** *ekspressi Suggestion and offer dari link video yang dibagikan."* (Lesson plan no. 4)

Furthermore, lesson plans number 3 and 5 contain learning activities that are included in the critical thinking category of WoT. In these activities, students are asked to comment and respond to the activities. In addition, this includes HOTS level C4, namely the ability to evaluate something in the evaluate stage. In lesson plan number 3, students are asked to comment on a phenomenal video about events that occur in the community. The comments should be 50-100 words long and involve expressions of giving and asking for opinions. On the other hand, in lesson plan number 5, students were requested to respond to the result of other groups' presentations addressing the differences in each suggestion and offer expression. Those activities in accordance with ATC21s framework descriptors which are analyze and evaluate major alternative points of view and evaluate, assess claims and arguments.

> "*Siswa memajang sebuah video fenomenal tentang kejadian yang ada dimasyarakat dan* ***mengomentari*** *sepanjang 50-100 kata yang didalamnya melibatkan memberi dan meminta pendapat dan pikiran"* (Lesson plan no. 3)

> *"****Menanggapi*** *hasil sajian kelompok mengenai perbedaan setiap ekspresi suggestion and offer"* (Lesson plan no.5)

The learning activities in lesson plans number 2 and 5 include WoT for the category of creativity and innovation. Students are asked to make dialogues using expressions from the material they have

learned. In this activity, HOTS level C6 was found which is in the create stage. It is confirmed the idea of Bagheri (2018), that critical thinking has a major impact on a student's oral ability.

> "***Menyusun*** *dialog situasional dengan menerapkan memberi dan meminta pendapat dan pikiran"* (Lesson plan 2)

> *"**Membuat** dialog ekspresi suggestion and offer secara berpasangan."* (Lesson plan 5)

It is verified partly by Tuzlukova & Prabhukanth (2018) that majority of learning activities support critical thinking only not problem-solving. Moreover, the majority of the research finding that lesson plan in learning activities fostering the verbs of critical thinking and creativity and innovation.

4. Conclusion and Suggestion

This study aims to explore ways of thinking in learning activities in lesson plans. In the contrary, the evidence from this study reveals that fostering WoT have not wholly incorporated in the current lesson plans. However, there are no activities which cover the problem-solving category. Thus, it can be concluded that the ways of thinking throughout full lesson plans were insufficiently incorporated with learning activities. For further research it is also suggested to re-aligning the learning activities in lesson plans to be in line with Anderson and Krathwol's taxonomy and ATC21S framework descriptors by Griffin. The adjustment is expected to standardize the language skills and furnishing the students of senior high school with ways of thinking (WoT).

The research found some limitations, the findings cannot be generalized to SMA in Jakarta because this study was limited to only two private schools. In addition, none of the lesson plans found problem-solving skills. Because this research conducted in lesson plans whereas the probability of problem-solving skills occurred in teaching and learning process. The main obstacles in conducting this research were the process of gathering the existing learning activities in lesson plans. This part was challenging for the researchers as there were many senior high schools which refuse to hand in their lesson plans. Therefore, the researchers suggest the senior high school to be more cooperative to lesson plan designer and researchers in the researchers hold the research ethics.

References

Alismail, H. A., & McGuire, P. (2015). 21 St Century Standards and Curriculum: Current Research and Practice. *Journal of Education and Practice*, *6*(6), 150–155. http://files.eric.ed.gov/fulltext/EJ1083656.pdf

Ary, D., Jacobs, L., Sorensen, C., & Razavieh, A. (2010). Introduction to Research in Education (8th ed.). Belmont, CA: Wadsworth.

Bagheri, N. (2018). Critical Thinking and Autonomy in Speaking Ability: A Case Study. *International Journal on Studies in English Language and Literature*, *6*(5), 73–83. https://doi.org/10.20431/2347-3134.0605009

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

Chalkiadaki, A. (2018). A systematic literature review of 21st century skills and competencies in primary education. *International Journal of Instruction*, *11*(3), 1–16.

https://doi.org/10.12973/iji.2018.1131a

Djami, C. B. N., & Kuswandono, P. (2020). Teachers' Strategies to Implement Higher-Order Thinking Skills in English Instruction. *Metathesis: Journal of English Language, Literature, and Teaching*, *4*(1), 25. https://doi.org/10.31002/metathesis.v4i1.2048

Griffin, P., & McGaw, B. (2012). *Assessment and Teaching of 21st Century Skills* (E. Care (Ed.)). Springer.

Huh, K., & Lee, J. (2020). Fostering creativity and language skills of foreign language learners through SMART learning environments: Evidence from fifth-grade Korean EFL learners. *TESOL Journal*, *11*(2). https://doi.org/10.1002/tesj.489

Miri, F., & Azizi, B. (2018). Theory and Practice in Language Studies. *Theory and Practice in Language Studies*, *1*(5), 509–515.

Nadara, S., & Peng, C. F. (2018). *Implementation Of Critical And Creative Thinking Skills In The Teching And Learning Of Literature Component In Secondary School*.

Ratnawati, R. (2017). Developing a Lesson Plan for Teaching English for Specific Purposes To Adult Learners At a Private University. *JALL (Journal of Applied Linguistics and Literacy)*, *1*(2), 33. https://doi.org/10.25157/jall.v1i2.1729

Rosba, E., Zubaidah, S., Mahanal, S., & Sulisetijono, S. (2021). College students' critical thinking skills and creativity. *AIP Conference Proceedings*, *2330*(March). https://doi.org/10.1063/5.0043294

Saavedra, A. R., & Opfer, V. D. (2012). Learning 21st-century skills requires 21st-century teaching. *The Phi Delta Kappan*, *94*(1), 41–44.

Shelia, T. Y. (2014). Transforming pedagogies: Integrating 21st century skills and Web 2.0 technology. *Turkish Online Journal of Distance Education*, *15*(1), 166–173.

Singh, R. K., & Shaari, A. H. (2019). The analysis of Higher-Order Thinking skills in English reading comprehension tests in Malaysia. *Malaysian Journal of Society and Space*, *15*(01), 12–26. https://doi.org/10.17576/geo-2019-1501-02

Suto, I., & Eccles, H. (2014). The Cambridge approach to 21st century skills: Definitions, development and dilemmas for assessment. *IAEA Conference*, 1–10. http://www.cambridgeassessment.org.uk/Images/461811-the-cambridge-approach-to-21st-century-skills-definitions-development-and-dilemmas-for-assessment-.pdf

Tuzlukova, V., & Usha-Prabhukanth, K. (2018). Critical thinking and problem solving skills: English for science foundation program students' perspectives. *Зборник Радова Филозофског Факултета У Приштини*, *48*(3), 37–60. https://doi.org/10.5937/zrffp48-18664

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

Vieira, R. M., & Tenreiro-Vieira, C. (2014). Fostering Scientific Literacy and Critical Thinking in Elementary Science Education. *International Journal of Science and Mathematics Education*, *14*(4), 659–680. https://doi.org/10.1007/s10763-014-9605-2