THE APPLICATION OF METACOGNITION, COGNITIVISM, AND CONSTRUCTIVISM IN TEACHING WRITING SKILLS

Tamer Mohammad Al-Jarrah[1i],
Noraien Mansor[2],
Rania Hassan Talafhah[3],
Jarrah Mohammad Al-Jarrah[4],
[1]Faculty of Language and Communication,
Universiti Malaysia Terengganu, 21300 Kuala Nerus,
Terengganu, Malaysia
[2]Department of Language and Communication,
Universiti Malaysia Terengganu, 21300 Kuala Nerus,
Terengganu, Malaysia
[3]Assistant professor of TEFL,
Department of Curriculum and Instruction,
Faculty of Education, Yarmouk University, Jordan
[4]Assistant professor of TEFL,
Department of Educational Studies,
Faculty of Islamic Studies, Islamic University of Minnesota, USA

Abstract:

Writing performance competence is not a process in which teachers transmit knowledge to students, but one in which students construct their writing performance competence on their own initiative. This article proposes a novel approach to the investigation of student writing ability. It applies theories of Cognitivism, Constructivism, metacognition, and self-regulated learning to understand how beginning writers develop the ability to participate in the communicative practices of academic written communication and develop rhetorical consciousness. This paper advocates both teaching with metacognition and teaching for metacognition. To teach with metacognition, an EFL writing instructor should reflect upon his or her own teaching, and possess both metacognitive strategic knowledge and executive management strategies. When instructors teach for metacognition, students can learn about what the strategies are, how to use the strategies, when and why to apply the strategies, and as a result, learn to regulate their cognitive and constructivism activities.

Keywords: metacognitive, constructivism, cognitivism, writing skills

[1] Correspondence: email tameressay@yahoo.com

1. Introduction

Studies in learning process have found that students are more able to learn complex skills when they can think "metacognitively," that is, when they think about their own thinking and performance so they can consciously monitor and change it. Baradaran and Sarfarazi (2011) stated that the use of the principles of teaching based on cognitive and metacognitive as scaffolding through contextualize, modelling, discussion, contingency, and construction in the Zone of Proximal Development (ZPD) can solve the problems in teaching writing skills in English as a Foreign Language at the Islamic Azad University of Mashhad. The result shows that the scaffolding technique can improve students' performance in writing through generating ideas, structuring essays, drafting, writing and editing. Tufekci and Sapar (2011) also noted that a constructive method also improves the ability of students to produce creative writing among students as well as helps to improve their communication skills, knowledge of grammar, vocabulary, and increase awareness of the relationship of culture and language. This method also enhances students' motivation to learn a foreign language. Therefore, the approach based on cognitive and metacognitive strategies are able to produce students who can generate ideas in a critical and analytical writing skill.

Literature shows that there are weaknesses in students' writing skills. National Assessment of Educational Progress (NAEP; Salahu-Din, Persky, & Miller, 2008), only 33% of eighth-grade and 24% of 12th-grade students perform at or above the proficient level in writing (defined as solid academic performance). Student who score below this level are classified as obtaining only partial mastery of the literacy skill needed at their respective grade. If partial mastery is interpreted as performing below grade level, then 67% of eight-grade and 76% of 12 th-grade students can be considered as writing below grade level. Jordanian Examination Board Report (2010) also revealed that the number of students with moderately in essay writing is more than a high performance (excellent) and low. Many weaknesses that need to be improved to achieve the level of mastery of the writing at the level of honors and awards. Khir and Marzukhi (2009) reported that most students cannot write a good, accurate, and meets the requirements of the questions in a timely manner. Students do not have extensive knowledge about the topic of the essay is written, and the students are not able to display the contents of a brilliant, cannot describe the content in a clear and precise, and no evidence or examples of appropriate and clear to every argument put forth. Essay writing presented by students is not growing. Students write one or two sentences about the topic statement, but did not elaborate title by associating it with the current issues. In fact, the introduction paragraph does not have a strong association with the paragraph content. The same is done by the student in writing of the contents of paragraph essays in which most students cannot write a paragraph to fill more than 100 words and only use 30 to 40 words only.

In the case of writing activity, it is hypothesized that students who are weak in writing skills are related to their thinking skills. Writing activity involves high order

thinking skills. It is one of the most difficult skills in language proficiency. Review of past studies revealed that students did not have thinking and learning management skills (Shahlan, 2012). In addition, there is a lack of metacognitive knowledge namely declarative knowledge, conditional knowledge and procedural knowledge in writing tasks (Saemah, 2010). It is not known how students capitalized this kind of thinking skills in their writing activity.

2. Writing Performance in EFL Context

Writing is the skill used mostly to assess the students' performances in virtually all phases of educational levels: Primary, secondary and tertiary levels as well as entrance examinations, application letters, and research thesis and for the varieties of purposes (Tabatabaei & Assefi, 2012; Ibrahim, Eljack & Mohammed Elhassan, 2016). However, the effectiveness of any writing is determined by grammatical correctness as syntactic ambivalence leads to semantics ambiguity. It implies that good and meaningful composition goes beyond organization, but the correctness of the grammatical structures (Erkan, & Saban 2011). Tabatabaei and Assefi (2012) define language proficiency as "*a person's general level of ability in the target language, class performance is a person's achievement in the class*".

The issue of studying failure or poor performance of the students in the examination, in relation to writing attracts much interest of second language investigators. Some of these investigators concentrate on finding out how writing affects performance of students, what factors are responsible for errors in students' compositions and how to get rid of them. The issue of studying failure or poor performance of the students in the examination, in relation to writing attracts much interest of second language investigators. Some of these investigators concentrate on finding out how writing affects the performance of students, what factors are responsible for errors in students' compositions and how to get rid of them. Speaking and writing are both regarded as productive language skills requiring learners to 'produce' the language they have learned.

Mohamed and Zouaoui (2014) study focused on the EFL students' level of writing. The writing weaknesses were clearly shown due to lack of motivation, interest and reading practice. The weaknesses showed were the usage of wrong words, lack of idiomatic expressions, sentence elements, the wrong usage of connectives and unclear meaning of sentences. In order to improve students' written performance, it requires both time and practice. Teachers play an important role to enhance students' learning. Teachers need to teach the various sub-skills in teaching such as controlled, guided and free. Furthermore, students' writing should be access regularly in order to have a good and quality writing. This way, the students will be able to identify their mistakes and work on the mistakes in order not to make the same one all over again. There are five factors while promoting writing. The results of the study showed that the students' responses were categorized into five themes namely inadequate vocabulary, lack of

unity and coherence, encouragement, feedback and motivation (Rababah & Melhem, 2015).

Various studies in EFL learning relate to the students' poor performance with writing apprehension. Al-Khasawneh and Huwari (2013) asserted two assumptions, the initial assumption is that writing apprehension is negatively related to writing performance which may hinder learner's English learning in the classroom while the other assumption is that writing apprehension is negatively linked to proficiency which stem out from the learners' minds. According to Pelias, (2018) writing apprehension clearly impacts writing performance. Majority of researchers have looked into the relation between writing apprehension and writing performance.

A study by Al-Hazmi and Scholfield (2007) focused on the effort to improve the English writing of low proficiency Saudi university students, studying in a foreign language context. The samples of the study consisted of English performance of third year students, BA in English at King Khalid University, Abha, Saudi Arabia. The subjects must be able to write, apart from course and exam compositions of expository, argumentative and narrative types, are formal letters, research reports, lesson plans, and translations of Arabic text. The subjects have six years of English in school and therefore, they are able to read and understand the task given.

3. Metacognition

Metacognition is viewed as the higher level of mental processes that one learns and uses to control one's thoughts or knowledge. According to Azevedo, Behnagh, Duffy, Harley, and Trevors, (2012) study conducted to comprise both metacognitive knowledge and metacognitive experiences. Metacognitive knowledge is about "anything cognitive" and "anything psychological". It involves an awareness of one's knowing about cognitive states and activities, and affective states, and control over this knowledge in order to achieve a specific goal. This knowledge is referred to as "declarative knowledge" "procedural knowledge" and "conditional knowledge". Declarative knowledge involves knowledge of 'what' one knows about cognitive states and activities states and activities involve knowledge of the world, understanding of one's own knowledge and capabilities and knowledge of strategy. Affective states concern knowledge of emotions, attitudes and motivation and this is an inherent characteristic of the learner. Procedural knowledge refers to knowledge of 'how' to use world, personal and strategic knowledge. Conditional knowledge refers to 'when' to apply this knowledge and 'why' one should apply it. This knowledge also includes how to evaluate the effectiveness of knowledge application. Baradaran and Sarfarazi, (2011) refers to metacognitive procedural knowledge or executive processes which are those that monitor selection and application, as well as regulate activities for solving problems. These processes involve both monitoring and directing other thought processes (Harris, Santangelo, & Graham, 2010)

A study by Al-Hazmi and Scholfield (2007) focused on the effort to improve the English writing of low proficiency Saudi university students, studying in a foreign language context. The samples of the study consisted of English performance of third year students, BA in English at King Khalid University, Abha, Saudi Arabia. The subjects must be able to write, apart from course and exam compositions of expository, argumentative and narrative types, are formal letters, research reports, lesson plans, and translations of Arabic text. The subjects have six years of English in school and therefore, they are able to read and understand the task given.

4. Metacognitive Strategies

Literature has identified three core procedures of metacognitive namely planning, monitoring and evaluating.

4.1 Planning
Students plan their learning in order to have a perfect learning environment. This way, they are able to focus on learning and develop strategies that are appropriate and suitable for them (Suskie, 2018).

Planning entails adoption of strategic methods in the allocation of resources towards influencing performance. As rightly observed by Fawzi, and Hussein (2013) before any task can be effectively accomplished, predictions can be made before writing, strategy sequencing and allocating time. Chen and Bennett (2012) study focused on an in-depth analysis of the distinct between quality and poor writing. From the findings, more experienced writers are better in planning effectively regardless of text "content," whereas poor writers are unable to do so. These findings are significant to the developmental sequence obtainable in regulatory metacognition.

However, planning is one of the unique strategies in metacognitive towards improving learning. The adoption of planning as a strategy enhances students' goals and how the goals can be effectively accomplished. Given this, proper learning with sensible use of resources that can have an effect on performance can be obtained. In essence, planning includes setting of goals, reading of relevant materials, questioning and task analysis.

It is important as well for students to build self-confidence and effort in order to be more responsible towards learning. Teachers can teach and guide students to set up their goals and make proper plan. With this, students can think about what they need and how it can be achieved. However, explicit of the goals should be the target of the teachers in order for the students not to be misguided. The clearer a goal is, the higher the possibility of students' accomplishment. For instance, students in an EFL writing class, might make plans such as organizing ideas, preparing an outline, and deciding on the techniques in order to produce a quality writing (Panahandeh & Asl, 2014).

In line with contending issues discussed above about the planning strategies, the present study will employ brainstorming techniques. Brainstorming is a useful

technique that helps learners to know whether they have few ideas, or too many. It can help them to know how to organize their thought before they put a pen on a paper. It refers to quickly writing down or taking inventory of learner thoughts as fast as they come to him. Brainstorming is aim at enumerating ones thought not to evaluate (Fawzi, & Hussein 2013). At the beginning stage, many writers use bullet points to write ideas or in other words brainstorming. Hashempour et al. (2015) suggested two ways for brainstorming when writing an essay. Note taking and cubing. Note taking is taking down any key words or points related to the topic given. The second way is that you should stay organized.

Fawzi and Hussein (2013) mentioned five ways involved during brainstorming: cubing, free writing, listing, mapping and researching. Cubing is a critical-thinking exercise to help students express their thoughts in opinion essays. A similar technique is to explore three perspectives. Firstly, to describe the topic, features, constituent parts, and challenges, and also to compare and contrast it with other topics that are similar. Secondly, is to trace the history and influences and evolution. Thirdly, to map the topic to similar topics. Learners will try writing freely as in following the points that was written. This way, learners will express more ideas while writing. New ideas will pop up and learners will add to the original writing. By jotting all the extra ideas in another piece of paper will help learners in adding it later on. In addition, the learners' writing will be full of new ideas and learners will be happy and content with the outcome. Graphics, color-coded circles or underlines and sourcing of references will be added in such a way so that the writing will be more readable.

4.2 Monitoring

In the monitoring stage, students tend to refer to the teacher for confirmation. They will report or ask questions pertaining to their writing. They are unsure of their writing and they will develop learning strategies in order to have a perfect writing. On the other hand, they might also adjust to new strategies for this reflection exercise will create learning opportunities (McMullen, 2009).

Monitoring connotes a process of comprehensive awareness and a follow up towards delivering a task. In research, monitoring goes with the ability to develop the students in a gradual process. However, several contemporary studies have found a strong connection between metacognitive knowledge and monitoring accuracy. In the work of Pearson (2014), the ability of adults to estimate how efficient they would understand a passage prior to reading was related to monitoring accuracy subjected to a post-reading comprehension test.

Similarly, studies by Tabatabaei, and Assefi, (2012) examined fifth and sixth-grader's ability to solve computer problems. Three groups involved in this study and the results showed that the monitored problem solving group solved more difficult and complex problems faster than the other remaining groups.

According to Andrade and Cizek, (2010), monitoring which involves supervision of progress being made in the process of achieving a goal and performance. It is also

needed to keep track learning process. With the aid of monitoring, understanding students' challenges in comprehension can be ascertained and how they can be tackled effectively (Sun, 2013).

The application of the above strategy by students needs to be verified through proper understanding of the usefulness of such in achieving the targeted purpose. Jahin, and Idrees (2012) claimed that background information is important for a person to write a good quality writing. Students will be recapped with strategies while writing and they will create new strategies while writing. This way, students will learn at their own paces and they will find the purpose of writing themselves. Furthermore, the present study will employ a CALLA Model, practice strategies such as hands-on/inquiry based activities and revision techniques.

4.3 Evaluating

Finally, in the evaluating stage, students look back on the work they have done and reflect on the strategies, tools, resources, and/or processes that they have gone through. Schmitz et al. (2004) stated that reflection is transfer when it is being carried out or in other words "reflection-on-action".

Evaluation simply connotes appraisal of a policy implementation. With evaluation, a policy or strategy adopted towards achieving a purpose can be examined and appraised either it meets up with the peoples' expectation. In learning, evaluation serves as a form of regulation which assists in re-evaluating a person's goals and conclusions. Numerous numbers of studies focused on metacognitive knowledge and regulatory skills (McNamara, Crossley, & McCarthy, 2010) claimed that in text revision found that poor writers were not able to adopt as compared to good writers. Good writers used referred to as the "knowledge transforming" model while poor writers used a "knowledge-telling" model (Bereiter & Scardamalia, 2013).

Evaluating refers to the last process of examining and grading the outcome of a task and the strategies used during the learning process (Sun, 2013). Evaluating is related with monitoring where teachers will play an important role. For instance, when the learner does not understand the task, he would rewrite that paragraph. When the learner is confused or unsure, he would skip the question and find the easier ones (Tsai, 2009).

Not only that, evaluation is intended to showcase how efficient a task is and what is the level of accomplishment such task has achieved. Evaluation is connected with monitoring and the latter usually influences the former. To evaluate the outcome of students' learning, El-Koumy, (2016) suggested that teachers have students that can respond thoughtfully to the following questions: "(1) what am I trying to accomplish? (2) What strategies am I using? (3) How well am I using them? (4) What is the outcome? (5) What else could I do?" When the students answer the questions, they will be able to reflect their process of learning. They will be able to identify the success of writing and strategies that they have used during the writing process. On the other hand, the monitoring strategies will correspond to the evaluation (Thamraksa, 2005).

In relation to the present study, using CALLA model students will be trained to practice self-evaluation to reflect their own learning, to evaluate as well as to assess their own strategy they adopt when writing in English.

5. Cognitivism Theory

The term "cognition" refers to thinking, a process that includes all processes of memorization, forgetting and elaborating. Cognitive theories focus on the conceptualization of students' learning processes and address the issues of how information is received, organized, stored, and retrieved by the mind. Learning is concerned not so much with what learners do but with what they know and how they come to acquire it (Ertmer & Newby, 2013). Knowledge acquisition is described as a mental activity that entails internal coding and structuring by the learner. The learner is viewed as a very active participant in the learning process. Cognitivism is often used in developing classroom lesson and helping students learn higher-order thinking skill. Therefore, cognitivism focuses on the unobservable phenomena that are happening inside the head. Piaget studied the cognitive developmental stages of a child. He identified two processes in cognitive development namely assimilation and accommodation (Schunk, 2012).

Assimilation is the process of incorporation of new knowledge into the existing knowledge. Also, assimilation is using an existing schema to deal with a new object or situation. To Piaget, assimilation meant integrating external elements into structures of lives or environments, or those we could have through experience. Assimilation is how humans perceive and adapt to new information. It is the process of fitting new information into pre-existing cognitive schemas. In contrast, Accommodation is the process of changing cognitive schema after new experience and impression. In addition, this happens when the existing schema (knowledge) does not work, and needs to be changed to deal with a new object or situation. The more complex example can be the evaluation of human races on abstract level. In fact, assimilation and accommodation typically work side by side in learning. They are two sides of adaptation to learning. Their cognitive developmental schema expands either in abstract or concrete level with the passage of time. Therefore, teacher should evaluate, access, and rate students accordingly. Accommodation is the process of taking new information in one's environment and altering pre-existing schemas in order to fit in the new information. This happens when the existing schema (knowledge) does not work and needs to be changed to deal with a new object or situation. Accommodation is imperative because it is how people will continue to interpret new concepts, schemas, frameworks, and more. Piaget believed that the human brain has been programmed through evolution to bring equilibrium, which is what he believed ultimately influences structures by the internal and external processes through assimilation and accommodation (Beard, 2013; Yilmaz, 2011).

5.1 Relevance of Cognitivism to the Current Study

The selection of cognitivism is based on the aim of the research study. The purpose of the study is to gather information regarding student's cognitive abilities such as their concept formation, long-term memory, ability of students to build up new knowledge during their learning, and their capabilities of reasoning. Cognitive approach can inform us on how people gain new knowledge, how they gradually move from lower level thinking to high level thinking, the schema development, the process of accommodation and assimilation, and a connection between prior knowledge to new knowledge. According to Piaget (1976); Bhattacharjee, (2015) assimilation and accommodation require an active learner, not a passive one, because problem-solving skills cannot be taught, they must be discovered. These technical mental functioning is part of student's secondary school. Hence, the mental process of students to learn and to solve problems shares a part of cognitivism (Darabi, 2011). For example, in classroom, instruction should be organized, sequenced, and presented in a manner that is understandable and meaningful to the learner. Cognitivism emphasizes retention and recall through the use of quality teaching practice.

The main goal of learning instruction through cognitivism is for students to arrive at scientifically acceptable solutions. In a traditional classroom, students wait for the teacher to present the correct information, which is then reinforced by a textbook. Actual learning is accomplished through practice, repetition, and reinforcement of correct answers. Content is broken down into behavioural objectives to be met, skills to be mastered, and tests to be evaluated. Educators concentrate on how to teach and what to evaluate. As a result, students strive only to complete the activity quickly or correctly with little thought of the tasks significance. The teacher measures observable behaviour rather than conceptual change or understanding. Lectures, objectives, textbooks, tests, and grades reinforce this approach. The result is that students memorize a variety of terms but often cannot apply them to problems or outside experiences because they do not truly understand them.

6. Constructivism Theory

Constructivism is concerned with explaining how knowledge is produced and how students learn in the world. Constructivism proposes that learning is acquired when connections are made between the personal past experience of students and new experience with modification to become new learning. Students are core matter while teacher just act as a facilitator (Chen & Bennett, 2012). This unique perspective to education views knowledge as a product of reality. Cognitivists considered mind as a reference tool to world whereas constructivist believed that mind filters input from the world to produce its own unique reality (Ertmer & Newby, 2013). Gordon (2009) suggests that teachers should promote experiences that require students to become active learner's scholarly participators in the learning process.

Furthermore, Constructivist teachers encourage students to constantly assess how the activity is helping them gain understanding. By questioning themselves and their strategies, students in the constructivist classroom ideally become "expert learners." This gives them ever-broadening tools to keep learning. With a well-planned classroom environment, the students learn how to learn.

6.1 Relevance of Constructivism to the Current Study

In the constructivist classroom, Constructivists believe that educations should be student-cantered and that the teacher facilitates learning rather than acts as an authority who transmits information to students. The teacher examines each students understanding and develops instructional techniques that create cognitive conflict to help adjust the students' alternative conceptions. Progress is slow as a smaller number of concepts are covered and greater value is placed on understanding. Students must actively participate in learning through the intervention writing module because the teacher does not just provide answers. Learning depends on the shared experiences of students, peers, and the teacher. Collaboration with others is so important that cooperative learning is a major teaching method used in the constructivist classroom.

The constructivism is selected because of the strong connection to secondary student's education. Cooperative learning, leadership qualities, problem solving, creativity, and active participation are characteristics of secondary student's education. Students construct new understandings using what they already know, and prior knowledge influences what new or modified knowledge they will construct from new learning experiences. Learning is active rather than passive; students may need different experiences from the interaction inside the classroom to advance different levels of understanding. A focus on student-centred learning may well be the most important contribution of constructivism. Learning theory of constructivism incorporates a learning process wherein the student gains their own conclusions through the creative aid of the teacher as a facilitator. The best way to plan teacher worksheets, homework, lesson plans, and study skills for the students, is to create a curriculum which allows each student to solve problems and to have an ability to write a good composition while the teacher monitors and flexibly guides the students to the correct answer, while encouraging critical thinking.

Constructivism recognizes that students are at different levels of understanding and elicit a variety of ideas. Sharing their ideas with others allows them to clarify their own thoughts and consider those of their peers. Heterogeneous cooperative groups allow students to share ideas, reflect on the ideas of others, and debate differences in views. Students may not be thinking in the same manner, but they are learning ideas in ways that are meaningful to them. A constructivist classroom also requires hands-on learning. a constructivist takes a position that the learner must have experience with hypothesizing and predicting, manipulating objects, posing questions, researching answers, imagining, investigating, and inventing. The learning cycle also belongs in the constructivist science classroom. Through the process of exploration, concept

introduction, and application, students are able to disclose and discuss conceptions and then construct patterns and relationships.

Education at all levels is a cycle in that educators often repeat the same techniques by which they were taught. Teachers who incorporate the constructivist model into their classrooms may need to change the way they plan and use activities in order to encourage student interactions, decision-making, reflection, debate, and problem solving. Constructivist teacher must use outside resources and materials such as additional books, videotapes, and computer programs and not rely solely on a textbook to enhance learning. In planning a lesson, teachers must not overestimate or underestimate the learning abilities of each student. Constructivist teachers must observe the students' actions and listen to their views without making judgments or trying to correct answers. This strategy encourages students to take risks and develop their own ideas without fear of being incorrect. Teachers in the constructivist classroom may have to alter existing grading systems and rely more on observation, writing assignments, and portfolios rather than test scores, to assess learning. Selecting appropriate tasks, modifying existing grading systems and other changes from traditional to the constructivist mode of teaching require a large amount of time and energy. It is difficult to eliminate teaching practices that have become entrenched in our culture. Simple workshops will not accomplish this objective. Teachers must believe in the new ideas and make them a part of their own teaching frameworks.

At this stage the students apply the new concept in other similar educational situations. This stage plays an important role in widening the pupils' understanding of the concept they have encountered during the two stages of discovery and presentation. The teacher must give students enough time to implement what they have learned; it also gives students the opportunity to discuss each other during this stage and reveals their difficulties in learning the concept, and tries to help them overcome such difficulties.

7. Conclusion

From our experience of teaching, many learners do not like to learn writing skill because they regard it as too difficult, and they cannot see the relevance of writing for their everyday or future lives. Learners also regularly enquire about effective study methods in writing. The use of Cognitivism, Constructivism, and metacognitive strategies could address these concerns as teachers, by valuing learners' ideas and feelings, could assist in improving learners' attitudes towards writing ability. Learner self-regulation could also be improved by the keeping of a reflective journal. By assigning real-life problems (problem solving activities), teachers have the opportunity to show the relevance of writing in learners' every day and future lives. The Cognitivism, Constructivism, and metacognitive strategies identified in this study could serve as a guide in ensuring effective teaching and assisting learners to study and learn writing effectively.

References

Al-Hazmi, S., & Scholfield, P. (2007). Enforced revision with checklist and peer feedback in EFL writing: The example of Saudi university students. *Scientific Journal of King Faisal University (Humanities and Management Sciences)*, *8*(2), 237-267.

Al-Khasawneh, F.M., & Huwari, I.F. (2013, October). The reasons behind the weaknesses of writing in English among pre-year students' at Taibah University. *Proceedings of the 3rd International Conference on International Studies (ICIS).* http://www.esp-world.info, Issue 38, vol. 14, 2013.

Andrade, H., & Cizek, G.J. (2010). Students as the definitive source of formative assessment: Academic self-assessment and the self-regulation of learning. In *Handbook of formative assessment* (pp. 102-117). Routledge.

Azevedo, R., Behnagh, R., Duffy, M., Harley, J., & Trevors, G. (2012). Metacognition and self-regulated learning in student-centered leaning environments. *Theoretical foundations of student-centered learning environments*, 171-197.

Baradaran, A., & Sarfarazi, B. (2011). The Impact of Scaffolding on the Iranian EFL Learners' English Academic Writing. Australian Journal of Basic & Applied Sciences, 5(12), 2265.

Beard, R.M. (2013). *An outline of Piaget's developmental psychology*. Routledge.

Bereiter, C., & Scardamalia, M. (2013). *The psychology of written composition*. Routledge.

Bhattacharjee, J. (2015). Constructivist approach to learning–an effective approach of teaching learning. *International Research Journal of Interdisciplinary & Multidisciplinary Studies*, *1*(4), 23-28.

Chen, R.T.H., & Bennett, S. (2012). When Chinese learners meet constructivist pedagogy online. *Higher Education*, *64*(5), 677-691.

Darabi, A., Arrastia, M.C., Nelson, D.W., Cornille, T., & Liang, X. (2011). Cognitive presence in asynchronous online learning: A comparison of four discussion strategies. *Journal of Computer Assisted Learning*, *27*(3), 216-227. doi: 10.1111/j.1365-2729.2010.00392.x.

El-Koumy, A.S. (2016). *Teaching English as a foreign language to students with learning disabilities at the intermediate and advanced levels: a multiple-strategies approach.* (Doctoral dissertation Suez University, Egypt).

Erkan, D.Y., & Saban, A.İ. (2011). Writing performance relative to writing apprehension, self-efficacy in writing, and attitudes towards writing: A correlational study in Turkish tertiary-level EFL. *Asian EFL journal*, 13(1), 164-172.

Ertmer, P.A., & Newby, T.J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, *26*(2), 43-71.

Fawzi, M., & Hussein, A.A. (2013). Enhancing students' motivation to write essays through brainstorming: A comparative study. *International Journal of Humanities and Social Science*, *3*(9), 191-196.

Gordon, M. (2009). Toward a pragmatic discourse of constructivism: Reflections on lessons from practice. *Educational studies*, *45*(1), 39-58. doi: 10.1080/00131940802546894

Ibrahim, M.E.E., Eljack, N.S.A., & Mohammed Elhassan, I.B. (2016). The effect of argumentative essay writing strategies on enhancing English as a foreign language learners critical thinking skills. *Sudan University of Science and Technology Deanship of Scientific Research Journal of Humanities Sciences*, 17(2), 18-22. http://repository.sustech.edu/handle/123456789/17098

Jahin, J.H., & Idrees, M.W. (2012). EFL major student teachers' writing proficiency and attitudes towards learning English. *Umm Al-Qura University Journal of Educational & Psychological Sciences*, *4*(1), 10-72.

Jordanian Examination Board Report. (2010). Announcement of results for SPM 2010 Paper.

Khir, M., & Marzukhi. (2009). Panduan KBSM. Karangan Gred A SPM. Shah Alam: Cerdik Publication.

McMullen, M.G. (2009). Using language learning strategies to improve the writing skills of Saudi EFL students: Will it really work?. *System*, *37*(3), 418-433. https://doi.org/10.1016/j.system.2009.05.001.

McNamara, D.S., Crossley, S.A., & McCarthy, P.M. (2010). Linguistic features of writing quality. *Written communication*, *27*(1), 57-86. doi: 10.1177/0741088309351547.

Mohamed, M., & Zouaoui, M. (2014). EFL writing hindrances and challenges: The case of second year students of English at Djillali Liabes. *Journal of Educational and Social Research*, *4*(3), 149.

Panahandeh, E., & Asl, S.E. (2014). The effect of planning and monitoring as metacognitive strategies on Iranian EFL learners' argumentative writing accuracy. *Procedia-Social and Behavioral Sciences*, *98*, 1409-1416. doi: 10.1016/j.sbspro.2014.03.559

Pearson, P.D. (2014). The roots of reading comprehension instruction. *In Handbook of research on reading comprehension* (pp. 27-55). Routledge.

Piaget, J. (1976). Piaget's theory. In *Piaget and his school* (pp. 11-23). Springer Berlin Heidelberg.

Rababah, L., & Melhem, N.B. (2015). Investigation into strategies of creativity in EFL writing in Jordan. *Journal of Literature, Languages and Linguistics*, *3*(5), 14-25.

Saemah, R., Zuria, M., Siti, F.M.Y., Ruslin, A., & Khadijah, W.I. (2010). The development of expert learners in the classroom. Contemporary Issues in Educational Research, 3(6), 1-8.

Salahu-Din, D., Persky, H., & Miller, J. (2008). The Nation's Report Card: Writing 2007 (NCES 2008–468). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

Schmitz, T.W., Kawahara-Baccus, T.N., & Johnson, S.C. (2004). Metacognitive evaluation, self-relevance, and the right prefrontal cortex.*Neuroimage*, *22*(2), 941-947. doi:10.1016/j.neuroimage.2004.02.018.

Schunk, D.H. (2012). *Learning theories an educational perspective sixth edition*. Pearson.

Shahlan. (2012). Keberkesanan Strategi 4-META dalam Penulisan Karangan Bahasa Melayu Pelajar Tingkatan 4. Tesis yang tidak diterbitkan. Universiti Kebangsaan Malaysia.

Sun, L. (2013). The effect of meta-cognitive learning strategies on English learning. *Theory and Practice in Language Studies*, *3*(11), 2004-2009. doi:10.4304/tpls.3.11.2004-2009.

Suskie, L. (2018). *Assessing student learning: A common sense guide*. John Wiley & Sons.

Tabatabaei, O., & Assefi, F. (2012). The Effect of portfolio assessment technique on writing performance of EFL learners. *English Language Teaching*, *5*(5), 138-147. doi:10.5539/elt.v5n5p138.

Thamraksa, C. (2005). Metacognition: A key to success for EFL learners. *Bangkok. Bangkok University*.

Tsai, M.J. (2009). The Model of Strategic e-Learning: Understanding and Evaluating Student e-Learning from Metacognitive Perspectives. *Educational Technology & Society*, *12*(1), 34-48.

Tufekci, D., & Sapar, V. (2011). Social constructivist approach: Transformation of "Little Red Riding Hood" for writing course. E-Journal of New World Sciences Academy, 6(2).

Yilmaz, K. (2011). The cognitive perspective on learning: Its theoretical underpinnings and implications for classroom practices. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *84*(5), 204-212. doi: 10.1080/00098655.2011.568989.