

# Vygotskianism and the Enhancement of Mobile Language Learners' Argumentative Writing Skill

**Danial Mehdipour Kolour**

University of Technology Malaysia, Faculty of Education  
mkdanial2@graduate.utm.my

**Kamal Khaksaran**

Iran University of Medical Sciences  
Khaksaran1771@gmail.com

**Mohamad Bilal Ali**

Associate Prof. Dr., University of Technology Malaysia  
Faculty of Education  
mba@utm.my

**ABSTRACT:** Willy-nilly, vast numbers of ESL learners, who today adopt mobile devices in their learning practices, will be obliged to make rich arguments when writing academic articles or sitting for standard exams during their academic life. However, due to the linear learning that language learners commonly experience through mobile applications, Mobile Language Learners (MLL) would not be able to create rich arguments. This paper maintains a theoretical stance on a psychological theory named social constructivism emanated from Vygotsky and explains that how higher order thinking skills flavored with a social constructivist framework can have a bearing on the way MLLs bring reasons and make conclusions to form valid and rich arguments culminating in knowledge construction in the on-the-go environment. The expected implication would be the diminution of MLLs' proclivity of being a passive knowledge recipient usually induced by sailing through mobile learning environment.

**KEYWORDS:** mobile language learners, mobile andragogy, critical thinking, argumentative writing, constructivism

## Introduction: Teaching and learning in the Mobile Century

Due to the fact that digital technology is an indispensable part of everyone's life in this century, both teachers and students have gone through an educational somersault, that is, the way they provide, find, and receive information, look on class, and share knowledge has metamorphosed. In the mobile century, students can learn anything, anywhere at any time and the mere provision of facts and figures thus can not pave the way for students to meet their real-life needs; teachers should not be the know-it-all figures of the classroom because, if so, students' learning experience would not enjoy the required 21st century skills which are according to (Trilling & Fadel 2009) are creativity, innovation, and entrepreneurship, critical thinking, collaboration, communication, character, cultural and ethical citizenship, and computer and digital technology.

Having been revolutionized, teachers' roles are not simply the knowledge and material transmitters due to the fact that learners have already access to far more unlimited online resources available at their fingertips. This turns out to be a blessing in disguise for it gives teachers the opportunity to adopt heutagogy in their methodology and make the class less teacher-centered where students' active, meaningful role is categorically identified (Hargis et al. 2014). In other words, teachers can make the (digital) learning experience more personalized and involve students in their own future. Given the mentioned opportunity, teachers should have their learners think critically, create, embrace technology instructionally, and collaborate to meet their needs in the mobile epoch, that is, the class should be responsive, dynamic, and engaging to simulate real-world skills and tasks so that learners would be able to appreciate the bearing of classroom knowledge and outside needs (Hosler 2013).

In this mobile epoch, what helps you climb up the ladder of success has transformed and the model of learning thus has been mutated. Teaching and learning in this mobile epoch are not bound to physical classroom environment; they have gone global simply because Wifi and mobile devices have seeped into people's lives (Tortorella & Graf 2017). It should be pointed out that students mainly find information, learn knowledge, communicate with their teachers and classmates, share notes etc in the virtual world. Considering this somersault, students can benefit from synchronous learning in authentic environment where they can receive instantaneous feedback to retrieve information creating a sense of ownership in their knowledge acquisition; moreover, the instructor through synchronous learning is afforded an overriding control over the flow of the students' verbal interactions as they are able to keep their students on track and tailor the class to their needs (Hwang 2014). However,

no one can repudiate the passivity and dearth of critical thinking skills that come with the use of mobile technology, in our case in language learning environment (Narayan 2017). Having access to infinite information in the blink of an eye, language learners incrementally would deprive themselves of questioning ideas, theories, assumptions, and the validity of information. They, therefore, may not be able to analyze information to develop their own position or in better words, to construct their own knowledge (Hwang et al. 2015). In the following section, we will discuss the challenges of teaching English to adult learners in the 21st century.

### Issues in English Language Teaching

Serving different purposes ranging from either general or academic ones, learning the English language has been a growing demand in this globalized world. Students come to the English class to learn how to write a resume for job applications, pursue their education, communicate and make friends with other international students, speak to their customers, shop, read and write an article, speak to their child's school principal etc. What arise from these indicated goals make language learners experience a feeling of apprehension about the instruction, teaching methodology, and their cognitive abilities.

As indicated above, English language learners, particularly adults, attend the class to meet a variety of objectives. This multifariousness of objectives pose some challenges on the role of the teacher facilitating and providing the instruction. In this regard, adult language learners show a higher propensity than young learners to put to real-life use what they learn in class and if this is not fulfilled and/or they can not see the pertinence between in-class knowledge and outside needs, they may feel apprehension about the instruction being delivered (Wlodkowski & Ginsberg 2017). Moreover, adult learners from different occupational backgrounds seek for prompt results providing them with internal motivation. Hence, some mentality factors may come into play and bruise their sense of fulfillment if the desired outcomes are not promptly achieved (Williams & Burden 2004). They might also deeply be under the influence of the methodology that had been adopted in their former class context and they, therefore, would build an affective filter, a phrase used by Krashen (1985), towards the fresh method used by another teacher. Teachers, for example, may follow task-based language teaching principles or employ technology in the classroom which all these may have an undesired bearing on language learners' mentality and make them filled with apprehension about their progress in learning English language (Williams & Burden 2004).

Another conundrum teachers may face in English classes is self-doubt that makes learners feel less certain about their cognitive abilities. Language learners may suffer from, according to Brookfield (1995), impostor syndrome when being instructed. In other words, feeling apprehension about losing face coming with making mistakes can be so controlling that drives language learners to become less desirous of taking part in communicative practices in the classroom. This hidden fear can have them think that their progress in learning a foreign language is slow or it is beyond their cognitive abilities.

More importantly, there exists another tied knot of teaching English which relates to the explicit, subject-domain teaching of critical thinking skills (McPeck 2016). Learners, adult learners in our case, subconsciously use critical thinking skills when it comes to finding jobs, choosing the best place to shop, understanding data in a chart or graph etc. However, these skills have not explicitly been taught so that they can not consciously apply them in their everyday life, that is, language learners' consciousness may not be raised on how to ask for clarification, integrate information from different sources, challenge an assumption, evaluate information, and suchlike (Tang 2016). This can be attributed to the subject-specific feature inherent in critical thinking as McPeck (2016) postulated. He believes that in order for critical thought to be provoked, one needs to be possessed of the content knowledge in that subject area. Similarly, Mason (2009) stated that "critical thinking implies a thorough knowledge of the discipline in which one is working, of its content and its epistemology: what constitute the truth of premises and the validity of argument in that discipline..." (p. 3). Accordingly, a full-fledged critical thinker in the field of English must have a broad knowledge of the field. To shed light on this matter, it must be asserted here that this does necessarily indicate English language learners cannot grasp the concept of critical thinking unless they are verbally equipped enough to demonstrate the before-mentioned critical thinking skills. They, therefore, would not be willing to partake in the everyday state of affairs which are willy-nilly tied to the application of critical thinking skills. In this vein, what comes of this challenge would be the learners' apprehension about the instruction, the teaching methodology, and their cognitive abilities culminating in their demotivation for attending English classes (Krashen 1985). In this case, teachers' competence and their methodology, however, would be in the limelight to motivate students to pursue their language learning (Dörnyei & Ushioda 2013).

The employment of mobile technology in language classes bears a resemblance to a double-edged sword. Although it provides students with easy access and unlimited information, it can deprive them of gaining and reinforcing critical thinking skills

including analyzing, evaluating, and building their own knowledge (Kong 2014). Since learners can have horizonless information at their fingertips, they would presumably show a predilection for taking it in without questioning the ideas, theories, assumptions, and validity of the available information. Nevertheless, mobile devices should be at the point of instruction, that is to say, it would be a distracting tool rather than a learning tool if they are simply employed for the sake of using technology (Fraillon et al. 2014).

In order for language learners to demonstrate their critical thinking abilities, teachers in the current digital era should add a layer of rigor to class; in other words, teachers should scaffold learning to engender higher order thinking laying the groundwork for their students to be critical thinkers (Tyner 2014). Rather than merely ask display and convergent questions which only demand, according to Bloom’s Taxonomy, the lower levels of the questioning pyramid, namely remembering, understanding, and applying, teachers are required to mainly choose thought-provoking, referential, and divergent questions calling for the higher levels of the pyramid that include analyzing, evaluating, and creating (Nunan 1987). Table 1. shows some samples of display and referential questions.

Table 1. Sample of Display and Referential Questions

Display Questions	Referential Questions
Who is this person in the picture?	What the differences and similarities are between these two pictures?
What does this word mean?	What are some other ways to tackle air pollution?
What is the synonym of X?	How do you think an educated person can help his society?
Does tea grow in cold climate?	
Where in Iran is Tehran located?	

## Bloom’s Hierarchy of Learning

It is required here to segue into the cognitive version of Bloom’s taxonomy which centers around how people learn and appreciate concepts. This taxonomy developed by Benjamin Bloom et al. (1956) is a means of assessing learners’ competence in their learning and development process. It is formed from various levels indicating how well one can fathom a certain topic which resolves wherein taxonomy one belongs. The graphic representation of the taxonomy (Anderson et al. 2001) is shown in Figure 1.

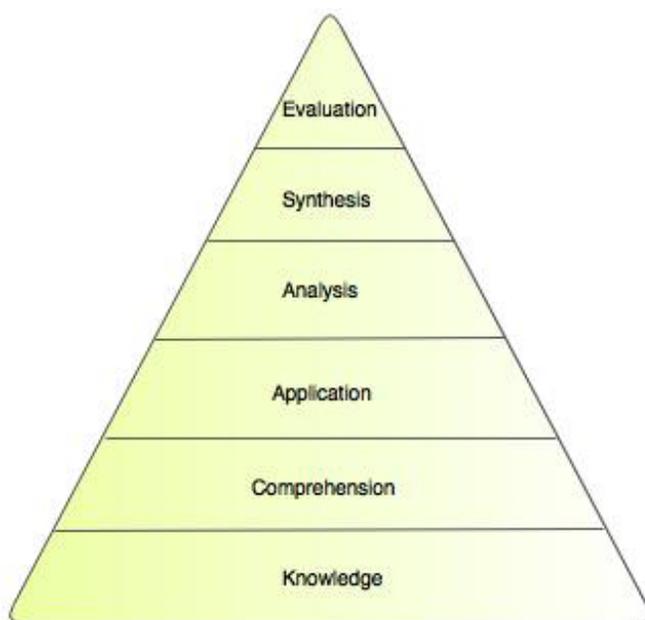


Figure 1. Bloom's Taxonomy

Source: [http://www.odu.edu/educ/ltschult/blooms\\_taxonomy.htm](http://www.odu.edu/educ/ltschult/blooms_taxonomy.htm)

A learner would initially phase his learning in from the bottom level which is knowledge to the top one which is evaluation. Moving from the bottom to the top, learners become proficient and adroit at the subject they are immersed in. When learners are at the evaluation level, their grasp and proficiency will pave the way for them to give others information about the subject, hold their own arguments, and construct their own knowledge (Forehand 2010).

As to the revised form of the taxonomy (Anderson et al. 2001), learners at the Knowledge level are expected to simply recollect facts and/or basic concepts—factual recall. This level can simply be targeted through asking display questions, as indicated above. For example, answering the question who is that person in the picture? would make it possible for you to be at this level of the taxonomy. The second level of the taxonomy is Comprehension which entails comparison, integration, and interpretation of rudimentary information. For example, given a controlled-grammar context, students might be asked to compare the use of present perfect tense with simple past tense and decide which tense is the most suitable one. The third level is Application which concentrates on the incorporation of the knowledge gained in the preceding levels to solve problems in new situations. In this spirit, students might be given some grammatically-wrong sentences and they

are asked to identify the flaws. They, therefore, need to draw on the knowledge they had gained in the previous levels. The next level which is construed as a higher order thinking skill is Analysis. Students at this level would be able to separate new information into fundamental segments. They would also be required to discern motives and causes embedded in the segments and identify evidence to support an opinion on a subject of interest. With respect to the analysis level, students might be asked why present perfect tense is suitable for this sentence; students at the level of Analysis are able to answer the question and provide compelling evidence for their opinion. The penultimate level of the taxonomy is Synthesis. Students at this level are expected to integrate and taxonomize different types of information from diverse sources; they would also be able to arrive at an alternate solution. In this sense, students might be asked to unscramble some words to form an idiom or conditional sentence. The final level of the taxonomy is Evaluation. Students at this level would be able to hold opinions, stand up for them based on studies, and create their own knowledge. They, for example, might be asked to justify, prioritize, recommend etc aiming at planning, creating, inventing, imagining etc (Anderson et al. 2001). These would culminate in students either changing the status quo of the subject area or creating new knowledge.

Having learners get to the top levels of the pyramid, teachers should promote project-based and/or task-based learning through which language learners need to categorize, compare and contrast, interpret, and synthesize information from multiple sources (Nunan 2006). These actions taken together turns language learners into active thinkers who use mobile technology for the sake of instruction. Approaching higher order thinking, teachers can have learners analyze information by asking quality questions of the material they are studying or researching and develop their own argument through evaluation (Tang 2016). In the following section, the art of argumentation and how it can stimulate language learners' higher order thinking will be discussed.

## Argumentative writing skill

Writing skill in this globalized epoch has been the ground zero from which diverse programs, professions, and curricula emit. Humans of different occupations such as educators, artists, doctors, policy experts, to name but a few, are all readers and writers. However, no one was born with writing competency to write a coherent essay or write a persuasive topic sentence and it is therefore required to equip

students with this multidimensional written communication means encompassing linguistic, thinking, social, and cultural skills (Ariyanti 2016). Accordingly, the incontrovertible evidence of the importance of teaching writing can be demystified in Darwin's words as "man has an instinctive tendency to speak, as we see in the babble of our children, whereas no child has an instinctive tendency to bake, brew, or write" (Darwin 1871, 55). In this spirit, considering the essential sine qua non for English language acquisition, there exists proliferation of language learners seeking to gain the required writing skills to effectively participate in their occupational domain (Weldy et al. 2014).

Writing is a cognitively-complex skill which is interconnected with one's thinking manner (Dewey 1910) and it is, therefore, of critical importance to mention that argumentation is placed under the category of higher order thinking skills, hence making an argument, language learners are required to be committed to critical thinking skills; in other words, learners need to observe, discern and reflect on information, analyze and appreciate thinking, its functions, and assessment to lead to a constructive means of thinking (Paul & Elder 2007). Evidently, the disparity in argumentative writing proficiency is tied to the disparity in one's critical thinking skills.

An argument is a set of statements that together constitute at least one reason for a further statement named a conclusion. In the word of Brink-Budge (2007), "in critical thinking, the meaning of the word 'argument' goes further than just 'disagreement'. It is not enough to disagree: there must be an attempt to persuade someone that one position is preferable to another" (p. 9). A good argument has premises that make the conclusion likely to be true with the aim of persuasion of readers to whether accept an opinion or take an action towards that (Bacha 2010). Argumentative writing skill is of considerable importance in academic writing at the higher level of education, inasmuch as students need to adopt a perspective then provide compelling reasons and evidence to convince their readers (Wingate 2012). In this vein, the concept of argumentation is, therefore, closely allied to critical thinking skills due largely to the fact that to evaluate the soundness of arguments, that is to say, whether or not the premises support the conclusion is contingent upon the application of higher order thinking skills of Bloom's taxonomy, namely analysis, synthesis, and evaluation (Brink-Budgen 2007).

However, mobile language learners are not presumably trained and enlightened as to make a sound argument (Hyland 2005) and, moreover, they are not possessed of the required discriminating ability to discern a sound versus poor or invalid argument, mainly because most but not all language instructors are engrossed in teaching the

usual writing principles, primarily including prefabricated patterns, linguistic rules, and mechanical writing approaches (Kolour & Yaghoubi 2015).

## Mobile Andragogy

In the words of Weiss et al. (2016), education is a human right and everyone should have access to basic education with the aim of decreasing illiteracy, building a productive society, and changing the world for the better coming of it. However, the optimum way in this digital epoch to give everyone access to education around the world is to deliver it through mobile technology/devices.

The reason why mobile devices are the finest tools to meet this end is the fast-growing rate of mobile adoption in both developed and developing countries (Cook 2015). Using mobile technologies (e.g. smartphones, phablets, iPads) constantly, people are undergoing metamorphoses in the way they learn, work, play games, and communicate; these metamorphoses are providing people with ample opportunities to learn at their own convenience in terms of time and place (Traxler 2010), to amalgamate traditional and online learning, and to access education from remote areas. Along with these remarkable changes, has come the strong passion for the use of mobile devices in education which is known as mobile learning (m-learning). The accessibility of mobile devices and the continual enhancement of applications featuring augmented reality, location detection, speech recognition, and many others are laying the ground for the popping up of instructional functionality of these pocket-sized devices, including knowledge transmission, information exploration, task cooperation, online settings for discussion, and assessment, etc (Davison and Lazaros 2015).

These lightweight multifunctional devices are integrating different learning contexts seamlessly in a way that physical classrooms with teachers as the only knowledge repositories are not the only desired learning settings (Traxler 2010). Learning can also occur either in less-structured learning settings such as (online) forums, libraries, field trips, etc or in learner-regulatory and socially-mediated settings such as restaurants, airports to name but a few. Students through the use of mobile learning can experience inter-contexts learning polysynchronously (Oztok et al. 2014) that links formal and informal, academic and non-academic learning both in real or virtual settings, which is not tied to fixed class schedules or physical classrooms, as Hedberg and Stevenson (2014) stated “breaking away from text, time, and place” (p. 17). In this regard, the underpinning motives behind the use of mobile technology in English language learning should not be overlooked.

Language learning that once was enriched through the utilization of computers known as computer-supported language learning (CSLL) has given way to language learning through the use of lightweight multifunctional devices known as mobile-supported language learning (MSLL). Mobile language learning, as opposed to CSLL, has a lot less to do with technology aspects and more to do with unprecedented opportunities, that is to say, it serves as an extension to create fresh spaces in a fresh environment. Language learners thereupon are not bound to be in a computer lab or physical classroom depriving themselves of unconventional, personalized, and fortuitous learning (Cook 2015).

Segueing into the upsides of mobile technology, both language teachers, and learners can benefit greatly from the experience of the use of mobile technology into teaching modules. An English class coupled with mobile technology can encourage students to experience learning tailored to their learning style (Sung et al. 2016). Having considered student's learning style, mobile devices can provide language teachers with a fresh means to instruct and also offer them the chance to provide students with personalized feedback so that students can adapt and restructure when required, their cognition to build their own knowledge (Singh 2013). However, what language learners should give high priority to is the possession of the essential 21st century skills known as critical thinking skills, including having discerning eyes when finding oceanwide information available on the Internet, dealing with and analyzing information, building their own knowledge through the generation of new cognitive artifacts, and transferring what they gain through this learning process that culminates in collaborative and discussion-based learning (Kong 2014).

Although mobile devices have become a constant companion of every individual in the current era which has resulted in adding new dimensions—situated instruction as a case in point—to language learners' learning experience (Pei et al. 2014), the pedagogical functions of these multifunctional devices must be explored to a great extent (Calabrich 2016). We should not underscore the possible drawbacks and limitations that these handheld devices may impose on language learners. It must be noted here that along with these multifunctional devices adding new dimensions to learning experience, come many different (mobile) activities which do not necessarily result in positive learning outcomes (Winterhalder 2017); for example, language learners may spend long stretches of time having depthless interaction and facile arguments mainly because of the superficial designs for mobile learning activities (Alhassan 2016). Students may also be lured into checking non-educational websites. Moreover, the adoption of mobile devices may incline language learners to distance from oral communication which is one of the primary aims of language learning.

Similarly, Sung et al. (2015) pointed out that pondering over language learners' productive skills, namely speaking and writing, not many experimental studies have been done to investigate the role of MSL on writing.

## Constructivist and Social Constructivist Learning Theory

Constructivist learning theory, pioneered by Jean Piaget, posits that individuals generate knowledge based on what they already suppose and what they interpret from their experience (Schunk, 2012). Accordingly, humans actively make meaning through their life experience. It should be borne in mind that knowledge that is constructed can be restructured and altered if new information adds to the previous one. In respect of constructivism, learning should meaningfully take place in a real context to meet students' real-life needs (Fiorella & Mayer 2015). In other words, knowledge cannot be transferred unless it is applied. Fulfilling the mentioned aim, constructivists hold the view that lessons should dovetail with students' personal needs and interests; this encourages students' deep level of understanding and purposeful learning.

Given the several views on constructivism, there exist two comprehensive ones, individual and social constructivism. The former one, derived from Piaget's work, postulates that the universe and mind are not two separate entities, but rather they are tied to each other, in this regard, all individuals are not possessed of uniform cognition. Learning, consequently, cannot be transmuted from person to person. According to Piaget, individuals through their interactions with the universe construct and reconstruct knowledge which is mainly based on a personal level and thoughts (Schunk 2012).

Having been perceived as the crux of the present paper, social constructivism, as the name implies, focuses on the social community. This view of constructivism, pioneered by Lev Vygotsky, similarly states that one can construct and internalize knowledge through his interactions with the universe; however, what distinguishes his perspective from individual constructivism is his chief preoccupation with social interaction and culture (Churcher et al. 2014; Vygotsky 1978).

Adhering to the principles of constructivism, students would be engaged in problem-solving, higher order thinking skills, inquiry-based learning, and collaborative work (Narayan 2017). Teachers through the framework of constructivism can deliver higher-order thinking skills such as reasoning and problem-solving. Accordingly, applying different resources, students through problem-based learning work in groups to resolve a real-world problem and obtain carefully thought-out solutions. The motive behind it is the stimulation of real-world environment through which

students learn how to collaborate in gaining information, transfer, and apply their knowledge to a real-life context (Krathwohl 2002). Another pillar of constructivism is the inquiry-based instruction which is capable of promoting meaningful learning and critical thinking. Teachers can incorporate activities and tasks calling on students' prior knowledge and experience to hold debates and discuss concepts that culminate in students constructing their own frames of thought. Inquiry-based instruction is typically comprised of three stages, including exploration, discussion and presentation of new content, and application and expansion. These can furnish students with personalized and contextualized information flavored with guided questions so that they can address the questions they might raise and develop their understanding (Schunk 2012).

Given the concept of mobile language learning and argumentative writing themed with the above-mentioned pillars, it would clearly be possible to mention that social constructivism can be narrowed down to particular practices namely, role-playing which stimulates a time period, context, character etc; having arguments for and against controversial topics; using cooperative learning groups such as toastmaster classes with the aim of teaching manifold perspectives; and providing students with real-world activities such as writing a report about a sport match (Anderson, 2016). These practices taken together can sufficiently feed mobile language instruction with interactive writing lessons that make students use mobile devices for the sake of learning. In other words, due to the fact that social constructivism is able to define the roles of students and teachers, foster pedagogical/andragogical/heutagogical learning environment, and fertilize the communal discussion environment, students would be able to practice and experience active and meaningful writing processes.

## Discussion

The social nature of mobile technology equipped with native and hybrid applications along with the Internet connection has generally been construed as less-threatening, entertainment ambiance where users spend hours tapping their device keyboard to have non-academic, banal discussions or scrolling up and down to like different posts. It would consequently be an arduous task to maintain the instructional and/or constructive momentum of mobile devices among students (Narayan 2017). This challenge would even be more highlighted when it comes to teaching and/or learning higher-level tasks such as argumentative writing owing to the point that it has been associated with one's thinking and epistemic cognition (Dewey 1910). However, having been concentrated on argumentative writing, the present endeavor was made to

propose that having language learners engage in higher order thinking skills through the social-constructivist framework could enrich the mobile learning environment.

Similar to the social aspect inherent in mobile technology, (Vygotsky 1978) put forward that “human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them” (p. 88). In this regard, mobile applications using the native features of mobile devices can lay the proper ground to practice the pillars of social constructivism. However, these cannot guarantee meaningful, active learning ambiance where mobile learners are at the higher levels of Bloom’s taxonomy; in other words, language learners would not be able to analyze, synthesize, and evaluate information to construct knowledge.

This study took a stand on mobile language learners’ understanding of their thinking during a writing process through the incorporation of higher order thinking skills. Learners, for instance, are required to acquire the very skill of asking and answering referential questions. For it is undeniable that mobile language learners should be able to give any information available to their devices a higher order thought and to question it critically, simply because they have access to ocean-wide information. They, therefore, need to be able to analyze and assess the veracity of it. Last but not least, the proposed study would be able to guide other researchers into investigating the principles of Piaget’ Cognitive Development Theory in mobile language learning environment.

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