

**Using Blended Learning for Developing  
Complexity, Accuracy and Fluency (CAF)  
of EFL Millennial Students' Writings:  
Links to Anxiety**

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## Using Blended Learning for Developing Complexity, Accuracy and Fluency (CAF) of EFL Millennial Students' Writings: Links to Anxiety

**Dr. Hany I. Musa \***

### *Abstract*

The current study aimed at exploring the impact of FL writing instruction via the flex model of blended learning on the development of students' writing complexity, accuracy and fluency (CAF) as well as reducing their writing anxiety levels. The participants of the study were 12 millennial students (those born between 1980 and 1999) studying an Academic English Writing courses in the department of English Language and Translation in the college of Uqulat Assogour, Qassim University in KSA. A case study research method was employed with different techniques for data collection, namely a writing test, semi-structured interviews, observation form, and learning diaries. The students' responses were analyzed in terms of CAF and anxiety levels using pertinent measures. Qualitative data from learning diaries, observations, and interviews were descriptively analyzed. The main findings of the study revealed that the students showed development in accuracy and fluency and a decrease in complexity in Test 2 than Test 1; however, their Test 2 compositions were considered more understandable but less complex. Second, all students' levels of anxiety have been decreased to a noticeable degree. Interpretations of the results and pedagogical implications have been portrayed.

**Keywords:** millennial generation; L2 writing instruction: blended learning: complexity, accuracy, fluency: anxiety.

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استخدام التعلم المدمج فى تنمية درجة التعقيد والدقة والطلاقة  
فى كتابات طلاب الألفية الذين يدرسون اللغة الإنجليزية كلغة أجنبية  
وخفض مستوى القلق لديهم

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### المستخلص:

هدف البحث إلى دراسة أثر استخدام النموذج المرن للتعلم المدمج فى تنمية ثلاثة أبعاد أساسية فى الكتابة (التعقيد- الدقة- الطلاقة) وخفض مستوى القلق لدى طلاب الألفية (أولئك الذين ولدوا بين ١٩٨٠ و ١٩٩٩) ويدرسون مقرر الكتابة الأكاديمية بشعبة اللغة الإنجليزية والترجمة بكلية العلوم والآداب، ولتحقيق ذلك، استُخدمت الدراسة تصميم دراسة الحالة وأربعة أدوات هي: اختبار الكتابة؛ ومقابلات شخصية؛ وبطاقة ملاحظة؛ ويوميّات التعلم، وتكونت عينة البحث من (١٢) طالب من طلاب المستوى الثالث بالشعبة، وكشفت النتائج عن أثر إيجابى للنموذج المرن فى التعلم المدمج على تنمية الدقة والطلاقة لدى الطلاب وخفض مستوى القلق لديهم، كما أظهرت النتائج زيادة درجة مفهومية مقالات الطلاب بالرغم من قلة درجة تعقيد النص.

**الكلمات الرئيسية:** جيل الألفية؛ تدريس الكتابة فى اللغة الثانية: التعلم

المدمج: التعقيد والدقة والطلاقة: القلق.

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## I. INTRODUCTION

It is clearly evident that current students totally think and behave differently from their predecessors owing to the social shifts and modern technology. The ways students from the 1950s learned differ considerably from the ways students in the second millennium do. Fueled by rapid advances in computer and communication technology, students in the current generation come to classes with a distinct predisposition and attitude toward learning. They have many more other learning resources that they can easily access from their handheld gadgets instead of learning new knowledge from teachers or prescribed textbooks. Their intense interaction with such gadgets and the internet tagged them as "Net Generation", "Millennial Generation", or "Generation Y, which refers to a cohort born between 1982 to 2001 (Williams, 2013). For this and more, interest in generational learning is rapidly increasing in the different aspects of education (Djiwandono, 2017).

Generation is defined as a cohort born almost in the same years that share the conditions, problems, and sorrows of the same age, and undertake similar duties (Bozavli, 2016). Sociologically, each generation is designated with a specific name and formed with different features like Baby Boomers, generation X, generation Y or Millennial, generation Z, Nintendo, Wii, Internet, C, Google, Mobile, PowerPoint, Copy-Paste, Digital Homo Sapiens or Homo Zappiens (Wilkin, 2012). Nevertheless, in literature, a general agreement exists on a few terms. Those born between 1927 and 1945 are called a “silent generation” or “traditional generation”. Those between 1946 and 1964 are “baby boomers”. Those born between 1965 and 1979 are named as “X” while those between 1980 and 1999 are “Y” or millennials and those after 2000 are a “Z” generation children (Demirkaya, et al., 2015). Bozavli (2016) summarizes the nature of each generation by assuring that each generation

differs from the others in terms of characters and attributes. The traditional generation, for example, shows such attributes as an inability to communicate directly, or respect for authority and taking responsibility. Baby boomers, on the other hand, do not like conflict and are more optimistic. Regarding generation X, they support global issues and freedom. As for the millennials, they are more sociable, self-confident, and flexible in work, a multi-tasker, tolerant, and interested in technology. Finally, a Z generation grows up with modern technological tools such as the Internet, smartphones, iPads, and netbooks and lives constant novelties in technology.

Millennial students’ approaches to learning, is in principle and immensely, different from their ancestors. This spawned the interest of researchers in the field of language education to conduct several studies revolving around the ways used by this current Millennial generation to learn new knowledge and acquire different skills. In addition, researchers of the field of language education have also underscored the need for a more distinct paradigm for second language writing pedagogy (Ferris & Hedgcock, 2014; Manchón & de Haan, 2008) to meet such generation needs and requirements. The EFL students are required to write in English for various purposes, such as academic, practical, and communicative purposes.

Blended learning (BL) can be an alternative approach that holds considerable potential for the millennials in their process to develop their EFL writing. Blended learning, with its various models, namely, the Rotation Model, the Enriched- Blend Model, the Self-Blend model or even the Flex Model, entails a unique blend of traditional and supplementary education through technology, which offers an effective solution to the challenge teachers have to face when teaching a diverse group of students with different knowledge levels and learning

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preferences. Furthermore, blended learning provides increased time for practice, an abundant amount of input, and a platform that promotes and encourages the students' interaction and communication (Ferriman, 2013; Miyazoe & Anderson, 2012). For the most part, BL is a term used to describe the process of combining the advantages of both face-to-face conventional classes and online learning classes to ensure the optimal outcomes of learning. Horn & Staker (2011: 3) succinctly define BL as “any time a student learns at least in part at a supervised brick-and-mortar (traditional) location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace; often used synonymously with Hybrid Learning”. In a BL environment, teachers and FL learners are provided with the merits of pedagogical richness, the active use of teaching and learning strategies, multiple tools for interaction and discussion, and better access to knowledge (Yoon & Lee, 2010). Furthermore, plentiful information resources are available for students and teachers in L2 writing contexts with the development of technology. A variety of computer and social media applications can be utilized which can help students effectively and efficiently compose, revise, correct, store, and share texts (Pennington, 2004).

Among the different models of blended learning, the Flex Model is very noticeable and stands out for the potential it offers at higher education. The Flex model requires a course that may be supplemented with digital platforms equipped with projects, tutoring, and small group instruction. Students often work independently and move at their own speed.

The Qassim University context in KSA provides students and professors with the well-known interactive learning management system “Blackboard” (BB) as the main platform for online learning. BB has different features and rich

applications that can help enrich the teaching-learning process. In addition, the platform has another two add-on applications to augment the process; Zoom and Skype business through which individuals are licensed to create individual virtual classrooms which the BB does not provide for intensive training and practice. In addition, this well-developed platform is also connected with the electronic library SDL (Saudi Digital Library) to provide a resourceful agent that can be fully utilized for different academic purposes. Such a resourceful environment is supposed to provide students with a comfortable and flexible academic context that can help develop their writing performance and increase their level of self-confidence while writing.

Thus, this plentiful resources context is an ample context for maximizing the outputs for EFL students and it would be thought-provoking to conduct research in such a context with the aim of developing certain aspects of writing (CAF) by utilizing the flex model of BL approach that conforms the spirit of the millennial generation. This EFL context is clearly distinct from the native language context in that students have different educational and linguistic backgrounds from their native language or the population of the second or foreign languages in their homeland. However, foreign language writing research and pedagogy have little consideration to such contexts in which EFL students need to have ample opportunities to gain knowledge of L2 writing conventions and components to practice writing and time to interact with peers and teachers.

By the same token, researchers of FL/L2 examined writers' texts in terms of various features, including overall quality, linguistic accuracy, syntactic complexity, lexical features, content, mechanics, coherence and discourse features, fluency, and revision (Polio, 2001). Complexity, accuracy, and fluency (CAF) have been a thriving area of research targeting language



development for decades since they have been used both as performance descriptors for the oral and written assessment of language learners as well as indicators of learners' proficiency underlying their performance (e.g. Ferriman, 2013; Hwang, 2013; Ong & Zhang, 2010; So, 2015; Wigglesworth & Storch, 2009; So & Lee, 2013). In this regard, accuracy can be concerned with more control over the interlanguage system of writing, and fluency represents the ability of learners to communicate meaning in time during writing by prioritizing meaning over form. Finally, elaborateness and richness of the learner's linguistic L2 system speak about the linguistic complexity (Ellis, 2009; Vercellotti, 2017).

To address and develop students' CAF in L2/FL writing, the optimal L2/FL writing instruction with sufficient opportunities to practice and interact with peers and the teacher needs to be given to the students (So, 2015). However, the reality of teaching writing, be it general or academic, in the English language and translation departments of Qassim University is lacking applying a wide range of activities and tasks encompassed in blended learning. Such a lack of appropriate instruction, consequently, may not bring about the expected learning outcomes of students' development of fluency, complexity, and accuracy in L2 writing. Furthermore, and because these three features (CAF) represent one aspect of the learner's linguistic system, where the trade-off among them turns a thorny issue. Foster & Skehan (1996) confirms that the trade-off is between accuracy and complexity. Weigle, (2002) and Wigglesworth & Storch, (2009) propose the trade-off to be between fluency and accuracy. They suggest that unpressured online planning increases complexity and accuracy but negatively affects fluency.

As such, and due to the complex nature of writing and the challenging requirements associated with its performance, both

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skilled and unskilled FL/SL learners usually have a sense of negative feelings and high level of anxiety while writing in the foreign language, especially if such activities and their linked requirements are connected with other pivotal issues related to the successful completion of other courses and hence graduation. Therefore, this study aims to explore the impact of L2 writing instruction utilizing the flex model of blended learning on the development of third level EFL students’ complexity, accuracy and fluency (CAF) in writing and reducing their anxiety levels while writing. The study sought to find answers for the following research questions:

- 1) How does FL writing instruction in the flex models of BL environments affect the complexity of EFL millennial students' writing?
- 2) How does FL writing instruction in the flex models of BL environments affect the accuracy of EFL millennial students' writing?
- 3) How does FL writing instruction in the flex models of BL environments affect the fluency of EFL millennial students writing?
- 4) How does FL writing instruction in the flex models of BL affect students’ anxiety levels?

## **II. METHODOLOGY**

### **1. Research Design**

The researcher employed a descriptive and holistic case study research design with several instruments to gain in-depth qualitative pertinent data. The underpinning rationale for such a qualitative design was that the researcher was keen on providing a detailed and comprehensive description of CAF in its actual setting and identifying the key issues and themes arousing from such investigation. By using a range of tools concentrated on single cases gives the opportunity to build a detailed understanding of the ideas at hand, and establishes a sound

platform from which to explore the factors influencing the cases in greater detail. Creswell (2014: 28) supports this stating: “case studies are used to provide an in-depth analysis of the studied case which is constrained with respect to time, number, place or activity”. Thus, by adopting such design the researcher tried to provide the reader with an in-depth and vivid complete profile of the participants’ experiences, feelings, thoughts, worries, and perception of that situation and the reasons for such a profile.

## **2. Participants**

The participants of the study were 12 students enrolled in a mandatory Academic English Writing course. Passing the courses is a part of their completion of the mandatory courses in the third level of the English Language and Translation study plan at the College of Science and Arts of Uqlat Asugour at Qassim University. The students in this college were purposively selected according to predetermined criteria assigned by the researcher depending on the variables of the study. These criteria were; students’ level of writing ability (WA), computer and internet literacy, motivation to do the flex blended learning activities, and the English language level. In addition, the rationale behind such a sampling process was saturation rather than representation or generalization of the collected data to the whole population. Dilshad & Latif (2013: 191) confirm this view stating "the rationale behind this purposive sampling procedure is to select information-rich helpful case in obtaining in-depth information from those who are in a position to give it". Furthermore, the students’ writing ability level was generally intermediate, based on the pre-test results in reference to the writing band descriptors of ACTFL (ACTFL, 2015). Five of them were low intermediate, six were intermediate and the last one was a high intermediate.

## **3. Data collection and procedures**

### **A. Data collection tools**

The current study had employed several data collection instruments to collect, triangulate, validate, and cross-check the data obtained about CAF and anxiety levels of the participants. In other words, the researcher utilized a semi-structured interview, observation form, and learning diaries to collect the required data regarding blended learning. For the writing task, all participants were asked to continuously record their experiences, feelings, and perceptions and the problems that they encountered throughout the blended learning activities immediately after completion. The total number of diaries collected from the students was 33. In addition, observation forms were also compiled to document the important events and activities in both online and face-to-face modes that also serve as data for the study.

For the purpose of writing assessment, the participants were asked to write three compositions before and after treatment on three different predetermined topics based on their coursebook in descriptive, cause and effect, and comparison-contrast types, namely:

- *Explain how physical beauty differs from inner beauty*
- *What are the causes of climate change? Is climate change a natural phenomenon? Could climate change be avoided by a change in human behavior?*
- *The risk of social media*

Each composition consisted of 250 to 400 words. The participants had 50 minutes to write about each predetermined topic. Writing the composition should follow the predetermined format assigned in the course; introduction, body paragraphs, and conclusion. The hook, thesis statement, and supporting information should be provided clearly.

In order to score the three abovementioned compositions objectively, the researcher used the scale of Larsen- Freeman

(2006). In her study, Larsen-Freeman conducted an in-depth analysis of English language learners' performance through an objective assessment. Following Hunt (1964), she introduced a profile utilizing T-units in assessing both oral and written language productions in terms of accuracy, fluency, and complexity. For her, the concept of T-unit has been defined as “the shortest grammatically allowable sentences into which (writing can be split) or minimally terminable unit” (p. 594). It can also be understood as one main clause with all subordinate clauses attached to it. T-units are usually employed for analyzing written and spoken discourse because they have been proven to be strongly correlated to language proficiency (Ellis & Barkhuizen, 2005). In this study, the researchers used this guideline to determine T-units, in the first place, then, used the Profile of Larsen- Freeman (2006) and Wigglesworth & Storch (2009) to determine the scores of CAF indices. Consequently, the writing accuracy, fluency, and complexity have been measured as follows:

- Complexity: The total number of clauses divided by the total number of T-units.
- Accuracy: The proportion of error-free T-units to total T-units (in terms of lexical, morphological, and syntactic errors);
- Fluency: This will be measured in terms of the average number of T-units and clauses per text.

[TABLE 1] CAF coding and measurement

Complexity	Mean length of T-units
Fluency	The total number of T-units
Accuracy	Error-free T-units and the percentage of

The last dimension of the study was the level of anxiety. Semi-structured interviews were held with the participants of the study throughout the study to find out about the effects of

using BL in a writing process approach on reducing their anxiety levels during the writing process. They were asked to voice and express their feelings at the beginning and at the end of the course; factors causing anxiety and factors which helped them cope with their anxiety.

**B. Procedures :**

Students followed the main stages and sub-stages of the process approach to writing based on the Liss & Davis (2012) model preceded by a training session, administered by the researcher and lasted for three hours, in which peer response, blended learning, and learning tools were provided. To be trained in writing, the students followed the five main stages of getting ready to write, drafting, revising, producing the final draft, and reviewing throughout the whole course of study. Students have been introduced to this process in the training session. After that, they were assigned to do three writing tasks during the 12 weeks of their first semester of the academic year 2018-2019.

In the getting ready to write step, the students were introduced to a topic of the process-oriented writing assignment (such as the health effects of exercising) and given a pre-writing activity, such as listing, outlining, clustering, and brainstorming, in the conventional classroom. They used the online discussion bulletin provided by the BB system either using the computer or their cell phones. The aim of this discussion was to brainstorm ideas; discuss, filter, cluster, map, and outline these ideas to make decisions to be drafted in the next writing stage. The students produced the first draft and participated in online peer response sessions through communication using the class bulletin board system and online chatting in the drafting step. After that, the first draft was posted on the course blog on the BB to be available for all students to do online peer review activity following the

guidelines of the peer review guide adopted from Moloudi (2011). Summary of their discussion was also posted on the class blog, saved on their cell phones or laptops, and brought to the next meeting in their normal classroom to be discussed after which the students wrote the second draft of their essay.

Then, they came to the discussion classroom in the following week and conducted an offline peer response session for the revising step. The researcher also reviewed their compositions and provided corrective feedback to all students either directly or through the blog section on the BB. Based on peer and teacher feedback, they produced the final product which was published on the class BB blog and on the class notice board as a motivation for them to see their final form of composition published for others to view. Last, they had time for reviewing the writing process in the discussion classroom for the reviewing step. In addition, the explicit writing activities that addressed content, organization, structure, and mechanics were provided on the BB course page so that they were exposed to a large amount of input about English writing.

These writing stages and activities were repeated for all the three writing tasks. During this period of time, the researcher provided guidance to students on how to write the different types of essays by guiding them to a group of writing activities and online discussions in each stage of the writing process. In the last two weeks of the study, the researcher collected the students' learning diaries and interviewed them in small groups using the Zoom application for holding meetings to elicit information concerning their perceptions about their learning experience (see the screenshots provided in the appendix for the course outline of the different items tackled during the 12weeks on BB).

### **III. RESULTS AND DISCUSSION**

The current study sought to investigate the utilization of the flex models of BL in developing CAF of EFL students and reducing their anxiety levels while writing. The research questions raised earlier in the methodology section emerged four themes associated with the development of CAF and the levels of anxiety. These themes were used in the following sections as guides to present the results of the study obtained.

### **1. The Development of Complexity in FL writing**

As presented in Table 2 bellow, ten students out of twelve showed a decreased measure in terms of clauses per T-unit, and only three students (4,5&12) showed an increased measurement in the percentage of dependent clauses to all clauses.

[TABLE 2] Complexity of the writings of students

Students	Clauses per T-unit	% of dependent clause per total clause		
	Test 1	Test 2	Test 1	Test 2
S1	1.45	1.25	0.25	0.25
S2	1.6	1.18	0.23	0.24
S3	1.45	1.23	0.16	0.23
S4	1.6	1.45	0.36	0.40
S5	1.45	1.22	0.25	0.56
S6	1.45	1.55	0.40	0.32
S7	1.55	1.60	0.62	0.36
S8	1.57	1.45	0.28	0.27
S9	1.52	1.40	0.22	0.22
S10	3	1.20	0.34	0.29
S11	2.98	1.36	0.26	0.34
S12	1.39	2	0.32	0.47

Of the twelve students, three cases are intriguing and worth noting. First, student (10) produced 3 and 1.20 clauses per T-unit in Tests 1 and 2, respectively. Also, the percentage of dependent clauses per total clauses was 0.88 and 0.29 on Tests 1 and 2. He was found to produce an excessive number of clauses



in one T-unit, and dependent clauses of total clauses, compared to his colleagues. It means too many clauses and dependent clauses compose his T-units. For example, in his essay about the "risk of social media", he wrote: "...*that offset the advantages, that people can manage, that it is undeniable, that they surely believe in*" and relative clauses, e.g., "*what they used, what people say*". The frequency of the dependent clauses is more than the other, however, the forms were the same. He repeatedly wrote noun clauses beginning with 'that' and relative clauses beginning with 'what.' As such, it was difficult to understand his text. He even admitted this and wrote in his learning diary that his "*writing style was somewhat redundant*".

On the other hand, in Test 2, he showed a tendency to avoid the excessive use of dependent clauses, producing fewer clauses and dependent clauses. While his text in Test 2 was less complex than Test 1, the meaning conveyed in Test 2 and the readability of his writing is clearer than that in Test 1.

Second, student (11) is notable for his increased measure of the percentage of dependent clauses per total clauses, showing 0.26 and 0.34 on Tests 1 and 2, respectively. The following are the introductory paragraph and the first body paragraph of Tests 1 and 2.

**Student (11) essay in Test 1 (*no corrections have been made*)**

- Social media is important to everyone nowadays... However, I disagree with the opinion that it is useful in everything.
- First, In the past, there were no social media and computers. But, Nowadays we have many programs that is available... so that our parents does not like them...

**Student (11) essay in Test 2 (*no corrections have been made*)**

- Because of social networks, we are able to communicate our thoughts and ideas over different topics with a large number of people, and raise our voice.

–Once parents have noticed the value of social networks in business, they started to ask question how to use them in different situations even in our village where they can sell or buy things.

Test 1 essay was composed of simple sentences rather than compound and complex sentences. He wrote only one sentence starting with a subordinating conjunction, ‘because,’ and rarely used adverbial clauses in Test 1. Also, he used the coordinating conjunctions, ‘and,’ “so” and ‘but’ at the point where conjunctive adverbs were integral. In Test 2, he produced dependent clauses, such as adverb clause (cause and effect), e.g., “because of social networks”. He also produced dependent clauses with subordinating conjunctions signaling the relationship of time and place “Once parents have noticed” “where they can sell or buy things”.

The third case, student (12), who is known to be more proficient in writing than his colleagues, showed the development of complexity from Test 1 to Test 2. The measures in clauses per T-unit are 1.39 (Test 1) and 2.00 (Test 2), and the measures in the percentage of dependent clauses per total clauses are 0.32 (Test 1) and 0.47 (Test 2). He produced a more complex text on Test 2 than Test 1. The following sentences, from his first body paragraph on Tests 1 and 2, can tell the difference:

**Student (12) essay in Test 1(*no corrections have been made*)**

–Beauty is one of my favorite topics to talk about. People are always looking for the beauty in order to enjoy themselves. Beauty is from inside or outside. Defining beauty, for me, it is something universal which people always feel satisfied and proud about.

**Student (12) essay in Test 1(*no corrections have been made*)**

–People are always looking for the beauty. It is either the

beauty from inside or outside. Beauty is something universal which people always feel satisfied and proud about sometimes. The most important thing for the beauty is how long it can stay. Due to its importance, people are debating about its criteria.

As seen in the essay of Test 1, student (12) did not have problems while connecting sentences, such as run-on sentences or comma splices. He tended to produce simple sentences with a variety of phrases. Instead of making sentences combined with several clauses, he used noun phrases, e.g., “defining beauty” adverbial phrase, e.g., ‘In order to enjoy themselves,’ and prepositional phrases, e.g., “for me”. In the essay of Test 2, he tended to write more compound and complex sentences. He connected several clauses in one T-unit, including noun clauses, e.g., “either...or, something universal which...and” and dependent clauses beginning with subordinating conjunctions for adverb clauses, e.g., “due to... people”. The degree of readability of his text in both tests is high, but for the second test, it is higher in terms of T-units, compound and complex sentences, and the relativity of their meaning. This can be attributed to his writing ability. The above excerpt from Test 2 clearly reveals that he did not produce chewy sentences, run-on sentences, or comma splices. His sentences were constructed with the accurate use of appropriate conjunctions and punctuation marks.

In sum, the students tended to produce more complex texts on Test 2 than Test 1 but not in such a significant way. Their use of coordinating conjunctions and subordinating conjunctions to connect the independent clauses and dependent clauses was available in both tests. However, the qualitative analysis of the text revealed that the essays in Test 2 were more readable than those in Test 1. Such an increase in the readability level can be attributed to the fact that they gained more self-confidence in

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having the chance to use the different resources allowed for them on the websites. This helped them gain several constructs and gave them the chance for more practice in learning the construct. In addition, this also increased their level of awareness that they should clearly convey the meaning in writing. More illustration is given in the discussion and conclusion sections about this issue.

**2. The development of accuracy**

The students’ accuracy in writing was measured by the percentage of error-free T-units and the percentage of error-free clauses. In general, most students’ writings revealed development from Test 1 to Test 2 in terms of accuracy, in favour of Test 2. This can be easily extrapolated from the following table:

TABLE 3] Accuracy of the writings of students

Students	% Error-free T-unit	% of error-free clauses		
	Test 1	Test 2	Test 1	Test 2
S1	20.00	38.00	37.25	39.00
S2	61.00	69.00	56.21	59.24
S3	54.00	82.00	53.22	86.58
S4	62.00	61.00	59.25	53.28
S5	21.00	39.00	39.00	42.00
S6	63.00	64.00	56.23	54.28
S7	56.00	76.00	64.39	86.59
S8	71.00	75.00	63.25	60.87
S9	76.00	79.00	53.67	50.89
S10	68.00	67.00	63.00	62.98
S11	49.0	59.00	60.23	60.89
S12	52.00	76.00	68.54	72.00

Of the results explained above, two cases are worth noting and highlighted; student 3 and student 7. Compared to other students, both made great development in the accuracy aspect. Student 3 error-free T-units and error-free clauses were 54.00% and 53.00% on Test 1 and 82.00% and 86.58% on Test 2. To clarify this more, the following are two excerpts from tests 1 and 2 for student 3:

**Student 3 Test 1 (*no corrections have been made*)**

- When we increases the concentration of greenhouse gases we are making Earth atmosphere more efficient greenhouse. Several reason are for climate cooling and warming throughout the history of the earth. Although it is dangerous but rapid warming like we see today is unusual in the history of the earth.

**Student 3 Test 2 (*no corrections have been made*)**

- we need to exert more effort to try to stop global warming and other effects on climate change. If the temperatures continue to rise, living things on an earth would extinct due to the high temperatures. If much

people contribute to control global warming, this world would be cooler and the high temperatures we currently have would decrease.

As seen in the essay of Test 1, he made several linguistic errors in singular and plural forms of nouns e.g., ‘we increases, several reason are, feedbacks.’ Also, he used two contrasting conjunctions in the same sentence "although, but" and various loss of commas “greenhouse gases we” “dangerous but”. His essays in Test 3 are quite different. Such mistakes were not existing except the inappropriate use of articles in the phrase, ‘an earth.’ Also, he used the quantifier “much” with the word “people” wrongly. To reflect on his writing development from Test1 to Test 2 through the course of blended learning, he wrote in his diaries:

“I think my writing has become more accurate than before. Such silly errors in basics of grammar do not exist anymore. Thanks to my friends and teachers. They consistently pointed out such silly errors. Also, having the chance to edit my essay and checking different websites is another reason. I do not say my writing is perfect now, but at least, I am not scared anymore.”

Most students in the group improved their accuracy levels while writing in Test 2. Their ability to monitor their texts for the production of accurate texts has been developed to a noticeable degree. This could be attributed to the feedback process given to them in the different stages of the writing process performed by their peers or tutor. Such feedback addressed several areas of linguistic development including the structure of the essay and mechanics of writing. Second, the online support they received while working allowed them to check several educational websites for correction. In addition, they had the chance to check their writings on the “Turn It In” application that is available on the university website. They also

practiced several online quizzes or exercises to reinforce their grammar knowledge. Thus, the feedback and activities provided in blended learning, and the constant use of different resources available, were likely augmented their awareness of grammar and structure and accordingly allowed it to be internalized on practice.

### 3. The development of fluency

Fluency was measured by the number of T-units and clauses per text. Not surprisingly, all the students in the group produced more T-units and clauses in Test 2 than Test 1. Table 4 presents this :

[TABLE 4] Fluency of the writings of students

Students	T-unit per text		Clauses per text	
	Test 1	Test 2	Test 1	Test 2
S1	11	18	18	23
S2	9	18	18	25
S3	19	29	21	42
S4	14	27	26	39
S5	15	25	27	52
S6	14	27	29	57
S7	12	29	29	56
S8	11	19	21	39
S9	14	21	21	41
S10	16	23	24	42
S11	18	29	30	59
S12	19	31	30	56

Students 3, 11, and 12 were three outstanding cases for their development of fluency. First, student 3 produced 19 T-units and 21 clauses on Test 1 while 29 T-units and 42 clauses on Test 2. The number of words in Tests 1 and 2 essays was 205 words and 436 words, respectively. An in-depth investigation of his essays yielded some major differences between the two essays. For example, in Test 1, he produced two sentences for introducing the topic; on the other hand, he introduced the same topic in Test 2, with more clauses, elaborating his ideas with

plentiful texts, in the introductory paragraph as seen in the excerpts below:

**Student 3 essay in Test 1**

A social network is a map of the relationships between individuals. It ranged from casual contact to close family relationships. Social media societies built around kinship and similarity.

**Student 3 essay in Test 2**

The technologies, which we call social media, allow us to share information, pictures and ideas among others. Whether social media is a boon or a bane is a matter of debate. However, one thing is sure that social media has become an essential part of the lives of people of all ages today.

Students 11 and 12, both, produced the largest number of T-units and clauses on Tests 1 and 2. Student 11 produced 18 and 29 T-units, and 30 and 59 clauses in Tests 1 and 2, respectively. Student 12, on the other hand, produced 19 and 31 T-units, and 30 and 56 clauses in Tests 1 and 2, respectively. The number of words in the essays for student 11 was 209 words in Test 1 and 436 words in Test 2. As for student 12, the number of words of his essay in Test 1 was 212, and 412 in Test 2. Both revealed an enormous development of fluency in writing.

On observing students while writing in the different stages of the writing process, it was noticeable that the students wrote the drafts faster on Test 2 than Test 1. It seems that the provided writing practices in the flex model of blended learning environment enhanced the students’ fluency. As described earlier, such millennial learners are talented in the use of the virtual environment. Consequently, feeling less anxious due to the given variety of platforms for interaction and a plentiful input from the Web, the students appeared to be more engaged



in the writing process. The learning environment was intensified with respect to input and interaction between peers and the teacher in both online and offline environments. Through the interaction and input, the students appeared to apply the writing conventions and rules to their writing more fluently.

In general, the students gained higher scores in Test 2 than Test 1. This is quite natural since most students' CAF in writing have been augmented due to the blended learning activities they practiced and the self-confidence they gained during the different stages of the writing process which in turn yielded accurate production of tests. It seems students started to believe in writing as one type of communication and place more emphasis on meaning negotiation through succinct expression. Table 5 below clearly shows the total scores of students on both tests which clearly reveal the differences.

[TABLE 5] Total scores of students on writing tests

Students	1	2	3	4	5	6
Test 1	62	56	53	63	68	53
Test 2	81	79	72	80	81	72
Students	7	8	9	10	11	12
Test 1	52	51	62	71	71	73
Test 2	73	76	72	79	87	91

#### **4. Blended learning and students' anxiety levels**

On asking students about their feelings when they first started attending writing classes and doing a writing project, the majority of them (ten out of twelve), stated that they felt anxious and negative. Only two students (students 11, 12), stated that they felt positive and self-confident. Student 7 explained that the most anxiety-provoking aspects of writing were the complexity of writing rules or conventions, unfamiliarity with the writing topics, and lack of sources or inability to find useful resources for their paper. Student 3 added to this stating that the required length and time constraints were also reported as anxiety-provoking factors.

Regarding the factors which reduced their anxiety level, the first factor which stood out among the whole responses was that students progressed writing step by step during the writing process technique and had an opportunity to apply each step. They emphasized that BL with a writing process technique allowed them to genuinely learn the different aspects of writing and apply them, rather than simply learning them in theory. Secondly, the student’s responses indicated that having clear instructions from the teacher about the assignments and the available resources required helped them reduce their anxiety. Other factors that were reported to reduce student anxiety included the following: researching the topic, having the opportunity to select their own topic, doing writing and revision exercises with peers and teachers, and learn at their own pace. Student 12 adds to this stating: *"the best thing about the combination of both BL and writing process is it we can take the time we need and set our own schedule instead of working within a structure that was set for us by an instructor"*. Student 11 viewed this differently. He stated: *"BL for me with writing process was of great benefit. I am fond of using the internet for doing everything, a feature which characterizes the current generation (millennial generation), that is why we prefer this to the conventional classroom which completely restricted and controlled by the instructor"*. Student 7 agreed with him saying that he felt autonomous during this period; *"I think this flex model is preparing us for the future which is characterized by the extensive use of online learning infused in a conventional environment"* he added.

#### **IV. CONCLUSION**

This study aimed at exploring the impact of writing instruction in the flex model of BL environments on the development of the EFL millennial students’ fluency, complexity, and accuracy in writing and reducing their anxiety

levels. The main findings of the study are as follows. First, all the students in the group gained higher values on Test 2 than Test 1 in accuracy and fluency. Second, most students in the two groups were found to produce less-complex structures in Test 2 essay than Test 1 essay; however, their essays were considered to be more understandable on Test 2 as explained earlier. The students seemed to recognize the fact that writing primarily conveys meaning to readers than structuring complex sentences. As such, all students gained high total scores in writing in Test 2 than Test 1. Third, all students' anxiety levels while writing have been reduced. These gained results indicate that writing instruction in BL for EFL millennial learners had a positive impact on the development of the students' CAF and their willingness to write.

The results obtained earlier, through the data analysis procedures, along with the observations fulfilled throughout the sessions, have revealed several issues. First, the collaborative nature of work provided by the flex model of BL, along with the writing process technique, sustain a pivotal role in decreasing students' level of anxiety and hence improving their performance in writing. The students felt safe and tend to encourage each other when they were working collaboratively as a team in EFL writing or try to get feedback from their instructor. In addition, the different discussion modes provided either online or face-to-face have also performed without any problems or conflicts. Such elements and factors are tuned with the nature of the millennial learners explained earlier. Bozavli (2016) explained that the millennial generation prefers such types of classroom environments and activities. This type of blended work which is coordinated with the nature of the student had enriched their macro and micro knowledge of writing and motivated them to write. For that reason, students were more motivated to learn and practice writing together,

share writing experiences, and build knowledge together with relevant to the various components of the essay. Consequently, students’ overall improvement in the different aspects of writing such as grammar, mechanics of writing, vocabulary, organization of ideas and paragraphs, and the content of the essay, as well as the low level of anxiety, is rationalized.

This is quite consistent with Challob, Bakar, and Latif (2016) study confirming that BL created a learning atmosphere that provides students with ample online collaborative learning opportunities and writing activities that enabled them to meet with their peers and exchange scaffolding virtually and change their level of writing anxiety and writing performance to a more positive feeling.

The above finding is also supported by Ansarimoghaddam and Bee (2013) and Tananuraksakul (2014) who argued that the different forms of collaboration, either with teachers or peers provide students with ample opportunity to practice writing and gain worthwhile knowledge from different resources. This knowledge may be in the form of exchanging writing experiences and topical knowledge or in the form of editing and revision comments during the peer review session.

Second, observation data also revealed that the time of finishing the final writing task was shorter than the earlier ones. Students were able to complete their essays in a shorter time because the flex model of BL had enabled them to derive benefits from the BB system and the different features provided such as the class blog and online forums. In addition, students also took advantage of the available thesaurus webpages provided to them on the sources section of the course on the BB system. This was clear in the different collocations some students used in their compositions such as "*offset, undeniable...*". In this way, they felt more open to learning and practicing EFL writing skills since online learning has liberated

the class from physical constraints with respect to time, place, and resources. Consequently, this helped them overcome their anxiety and continue practicing writing without any constraints to improve their EFL writing ability and be more creative. In this respect, as Basal (2015: 32) explains “*the use of technologies has effectively decreased physical limitations of the conventional classroom by presenting outside learning opportunities that allowed them to get rid of the traditional class constraints such as time, place and resources limitations which can be a source of writing anxiety and low levels of performance*”.

To conclude, the flex model of BL had created a supportive environment that had provided students with flexible learning opportunities that suit their different characteristics as millennial learners. Moreover, it helped them to feel less anxious, close to each other, and safe and in their learning environment. This encouraged them to learn at their own pace and share knowledge and learning experiences that enriched the content of their compositions. BL also allowed students to discuss many aspects of the writing task in advance either online or in the classroom, and thus students could dedicate more time for practicing writing only. In short, the commonly recognized advantages of BL in this study include flexibility, personalization, and interactivity derived from an online component and direct observation, immediate feedback, and spontaneity inherent from conventional teaching.

Though the study had a limitation due to its small number of participants and its subjective nature of research instruments, it could serve as a step forward in the field of EFL writing pedagogy. It stimulates the EFL students and their teachers to think about how to integrate online and face-to-face learning activities to bring the optimal outcomes in learning EFL writing. Further research needs to be conducted with a large number of

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participants and different research designs, to experimentally investigate the effectiveness of the different blended learning modes on different language performance aspects.

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